

# **Making improvements to clinical internship for physiotherapists**

Thesis submitted in accordance with the requirements of the University of Liverpool  
for the degree of Doctor of Business Administration by Hui Gek Ang

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# Abstract

**Title:** Making improvements to clinical internship for physiotherapists

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**Introduction:** Internship for physiotherapists is recognised as necessary and beneficial in preparing graduated students to enter the workforce at a desired level of proficiency. The training model should provide the intern with quality learning experiences in the real-world context to develop the necessary knowledge, skills, attitudes and behaviours that supports their transition to independent practice. Recent regulatory developments in Singapore have required that physiotherapy graduates undergo compulsory supervised practice before registration. My organization has launched the formal internship program recently to align with regulatory and administrative requirements. As a hospital leader, it is expedient that I conduct an action-oriented research to better understand and address the organisational issues surrounding clinical internship, an area that has not been fully explored in my organization and country. Understanding what successful learning or effective training looks is vital in providing an internship program that would optimally train interns or novice physiotherapists to be clinically competent and ready for professional practice.

**Objective:** The research objective was to gain insights on what makes for an effective physiotherapy internship; to evaluate my organization's current internship program and to formulate actionable strategies that can be implemented to progressively improve our current program.

**Method:** Different research methods were adopted in this action-oriented research. Based on a conceptual framework of the clinical learning environment theorised from existing literature, a survey questionnaire was designed to collect data from stakeholder groups on their perception of factors influencing the effectiveness of current internship program. Focus groups were conducted to obtain rich qualitative

data and to draw insights on the lived experiences of stakeholder-participants. Subsequent discussion of results with influential leaders support the triangulation of data and the needed buy-in from them to effect recommended change actions to improve practice.

**Results:** Six (6) major factors were found to influence the effectiveness of physiotherapy internship. These factors or themes that emerged from the data grounded in our practice were: coaching activity, intern (learner) factors, supervisor (teacher) factors, intern-supervisor relationship, environmental factors and program factors. The research found that intern-supervisor relationship was ranked most important in influencing the effectiveness of internship training by clinical supervisors, recent interns and the community of physiotherapists.

The overall effectiveness of our current internship program was rated average by all stakeholder groups. Strategies to improve current internship were developed and assessed by physiotherapy leaders for their implementation ability. These improvement strategies include clear definitions and articulation of supervised practice (internship) and coaching practice, specific guidance for interns and supervisors in preparing for their roles and responsibilities, and recommendations for capacity and capability development.

**Conclusion:** Through action research, I, the scholarly manager-leader, was able to collaboratively formulate actionable strategies with key physiotherapy leaders to make improvements to our internship program for physiotherapists. This research study has value-added both in informing and improving practice. The knowledge and insights gained serve the purposes of the local physiotherapy community in which it was carried out. The knowledge produced may also provide academic insights and concepts of social and organizational behaviour for the interests of the bigger research community.

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## **Chapter 1**

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### **INTRODUCTION**



# Introduction

## **Thesis Title**

Making improvements to clinical internship for physiotherapists

### **1.1 The Organizational Issue**

It is important that physiotherapy interns are trained to a high standard of clinical competence in preparation for professional practice as registered healthcare professionals. Internship is the bridge year post-graduation that transits a student from classroom learning to a novice independent practitioner in real-world practice. The clinical training of the novice physiotherapist by experienced practitioners involves real patient encounters and skills training in professionalism, clinical examination and communication. Although clinical training of fresh physiotherapy graduates has been offered by my hospital for some years, the program has never been reviewed for its effectiveness. The opinions of key stakeholders such as interns and clinical supervisors on their training experiences have never been sought. Coincidentally, the new regulatory authority, Allied Health Professions Council (AHPC) in Singapore, has recently enforced compulsory 1-year internship training for physiotherapists before individuals are qualified as registered practitioners. My hospital has responded with reorganising our internship program to a more structured one as well as complies with policy guidelines and administrative requirements. It is important to the hospital and physiotherapy leadership that the internship training we deliver not only meets policy requirements, but is also effective in producing competent physiotherapists for independent practice. This would translate into high standards of care delivery that would benefit the patient, the novice practitioner, the physiotherapy profession and the hospital.

Although the new program is in its infancy, it is nevertheless expedient to evaluate how well our internship program has been operating in terms of providing the clinical learning experiences that would fully prepare physiotherapy interns for professional practice. Regular review with stakeholders will also allow us to continually make improvements to our program to achieve optimal clinical training and development of interns. In my capacity as a hospital leader overseeing allied health professionals, I have particular interest to ensure that the delivery of internship training for physiotherapists is effectual and effective as these interns become the pipeline for our future healthcare workforce. Their proficiency will ensure high standards of care and best patient outcomes.

## **1.2 Context**

The background information of my hospital, the physiotherapy profession and local regulation in Singapore provided here sets the context of my research and the role I play as a manager-leader and change agent.

### *My hospital*

My hospital, the Singapore General Hospital (SGH), is the biggest tertiary teaching hospital in Singapore and has been providing clinical training to healthcare professionals including physiotherapy students for a good many years. As a public hospital, it has obligations to support national priority to train and nurture healthcare professionals for our health system. The medical, dental and pharmacy professions in my hospital have already adopted the structured supervisory framework for clinical internship as these more established professions were regulated decades earlier on.

### *Physiotherapy profession*

The Physiotherapy service was first introduced in Singapore in the 1940s by a British physiotherapist but it was not until 1991 that the first local physiotherapy course was

run at the Nanyang Polytechnic. Students would receive 1000 training hours in clinical observership and hands-on practice spread over the 3-years diploma course. With the capacity built from this local stream of graduates, the scope of Physiotherapy practice evolved and expanded in later years. Physiotherapy services have its roots basically in the public hospitals, where patients are seen based on medical referrals. In the last decade, there has been an evolving trend towards private physiotherapy services and community care. Increasing numbers of physiotherapists are setting up their own private practices or moving into long-term community care and home care, practising in facilities outside the hospitals. With increasing direct access by the public to care services provided by health professionals, the Ministry of Health in Singapore now sees it fit that the physiotherapy profession be regulated to ensure public interest is protected in terms of patient safety. The regulatory framework is to put in place the minimum requirements for the standards of professional education, professional conduct and professional competence so that physiotherapy graduates are suitably qualified to practise autonomously. The establishment of AHPC in Singapore to regulate allied health professions including the physiotherapists rides on the same regulatory regime and clinical supervisory framework for doctors, dentists, pharmacists and nurses.

The regulation of physiotherapy practice varies greatly around the world. In most countries, graduation from a physiotherapy school is the main avenue to practice physiotherapy or to receive a governmental licence or certificate to practice. Few countries have statutory requirements for entry-to-practice competencies to be met before a physiotherapist becomes registered to practise. Examples of those who do include Canada, New Zealand, United Kingdom and United States (see <http://www.inpttra.org/>). Singapore has now joined the ranks of these countries with its professional regulation of physiotherapists.

Before the inception of AHPC in 2014, the clinical training of fresh Physiotherapy graduates was conducted by assigned senior physiotherapists who would supervise or provide professional guidance to these novices as deemed fit; content and time-

wise. What has changed with the enforcement of new regulations is that our supervised training framework is now more structured, incorporating the documentation of contact hours of supervision between the intern and the clinical supervisor, and the submission of supervisor evaluation reports of interns on prescribed forms.

### *Local regulation*

For the regulation of supervised practice, the AHPC provides the Supervised Practice Guidelines (e.g. supervision intensity) as well as administrative guidelines (e.g. evaluation report timelines) to ensure that the employer or training organization have in place supervisory systems and structures to accept interns for clinical internship.

As an example, there are 3 levels of supervision intensity; or direct contact hours between supervisor and supervisee, that an intern would have to undergo; Level 1 (L1) to Level 3 (L3) where L1 is the greatest intensity. AHPC stipulates the contact hours between the supervisor and the intern to be minimally 4 hours / week in the 1st month (L1), 4 hours / fortnight in the 2<sup>nd</sup> – 6<sup>th</sup> month (L2) and then 4 hours / month from the 7<sup>th</sup> month onwards (L3).

### *My role as manager-leader and change agent*

As a hospital administrator, I am cognizant of the evolving changes in the healthcare landscape in Singapore. Healthcare practices have become increasingly complex and challenging with new emerging needs (e.g. ageing population, prevalence of chronic diseases), new threats (e.g. infectious disease outbreaks), increasing workload, new models of multidisciplinary care and technological developments. Healthcare professionals are expected to practise at high standards, delivering care that is safe and cost effective.

As a manager-leader with oversight of the Physiotherapists, I see my role in influencing the standards of practice to support best clinical care. It is important that interns and students are well trained; developing clinical competencies and appreciating workplace complexities and contextual tensions so that they are 'work-ready'. How clinical education is delivered is therefore crucial to achieve this end. I see myself as a change agent to influence the change that is needed to ensure our clinical training is optimal in meeting the needs of interns in terms of learning and developmental experiences that support best clinical practices. By involving key stakeholders to co-study the issues surrounding supervised practice of interns based on their personal experiences, perspectives and insights, a better understanding of the factors that influence clinical internship may be elucidated. Further to this, I can enthuse them to take ownership of the change that is needed to progressively make improvements to our current program.

As a senior hospital leader, I am fully aware that my direct involvement in studying the issue has its challenges; will participants share their experiences and opinions willingly or will they be guarded? 'Starting conversations' with stakeholders through focus groups would be an important approach to encourage authentic feedback, viewpoints and ideas to be shared. I recognise that building the trust of the stakeholder-participants as an authentic researcher and leader is crucial as it has impact on how I can bring the conversations to the next level, to influence and inspire action for change.

### **1.3 Study objective and implications**

The study objective is, therefore, to allow the 'voice' of stakeholders to be heard by engaging them actively as participants and co-inquirers, and to inspire and empower them to act on the change actions or interventions that would improve our training and development of physiotherapy interns.

The implication of this research is that the actionable knowledge generated in my context would be practically useful for our physiotherapists and physiotherapy leadership in enhancing training effectiveness of clinical internship. As this is the first time such a study is conducted in SGH, the data collected will form our baseline and serve as a reference point for our improvement efforts.

Insights from this research may have relevance for the bigger physiotherapy community in Singapore too as the practice settings are culturally more similar. The implications from this research could possibly extend beyond the specific operationalisation of my organization's internship program to policy considerations at a national level. The knowledge produced may also provide academic insights and concepts of social and organizational behaviour, which may be of interest to other researchers.

#### **1.4 The Research Objective**

In summary, my research objective is to involve key stakeholders as participants and co-inquirers in problematizing our organizational issue; to acquire knowledge and insights on what makes for an effective physiotherapy internship, and then be enthused to take ownership for the next steps; implementing the changes needed to improve our current internship program for physiotherapists.

#### **1.5 The Research Question**

The research question and sub-questions this study is going to answer are:

- a. what factors influence the effectiveness of clinical internship for physiotherapists in my organisational setting,
  - i. the relative importance of these factors, and
  - ii. the key aspects in each of these factors?
- b. what actionable strategies may be implemented progressively to improve our current internship program?

## **1.6 Thesis Outline**

The narrative of my research and the process taken in addressing the issues with key stakeholders will be unfolded from my problematizing the organizational issue in this introductory chapter and through the subsequent chapters:

### **Chapter 2: Literature Review**

- will provide a detailed review of the literature on the subject of clinical education; theories, models, practices. The key themes on clinical internship assimilated from literature and my personal experience is presented. The key themes also served as a guide for exploring the organizational issue with my participants

### **Chapter 3: Methodology**

- will discuss the methodological approaches deployed in my research; survey (quantitative method) and focus groups (qualitative methods). The blend of methods tap on multiple sources of data to gain a better understanding of reality and lend methodological rigor to my study

### **Chapter 4: Diagnosis of the issues (Findings)**

- will provide the key findings from data collection and analysis of quantitative and qualitative datasets. A good diagnosis is beneficial for prognosis but more importantly for taking action to resolve my organizational issue

### **Chapter 5: Planning for action (Recommendations)**

- will discuss the workable aspects formulated from in-depth stakeholders' discussions, participants' contributions of ideas and suggestions, my reflections, and insights from the literature

## Chapter 6: Implementing action (Discussion with influential leaders)

- will share on action steps agreed upon with influential physiotherapy leaders to improve current clinical internship to higher levels of efficacy and effectiveness

## Chapter 7: Reflections

- will share my reflections on this research journey as a scholarly practitioner and insider researcher, and implications for my future practice

## Chapter 8: Conclusion

- will summarise the key contributions of this research in terms of knowledge and practical solutions for my organization and the physiotherapists' community in preparing and transiting interns well into professional practice and the workforce. The knowledge produced may also provide academic insights and concepts of social and organizational behaviour for the interests of the bigger research community



## **Chapter 2**

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### **LITERATURE REVIEW**

# Literature Review

## **2.0 Introduction**

The subject of interest in this literature review is clinical education and supervision; more specifically physiotherapy internship where students transition to novice practitioners. Clinical education is focussed on the experiential learning process requiring “students to actively build and integrate their theoretical and practical knowledge, through the experience of clinical practice” (Milanese, Gordon and Pellatt, 2013, p.147). The entwined processes of clinical supervisor’ teaching and student’ learning of clinical skills in the workplace is a vital part of clinical education to develop competent practitioners to function successfully in the work force.

A search of the literature was conducted during the initial process of framing my organizational issue and organising the approach to my research. The objective of the search was to seek out and review extant literature on clinical education of physiotherapists, on what has been studied, theorised and including practices and strategies found to have enhanced the efficacy of clinical education. Academic and practitioner literature were consulted to mine information that may be relevant to my research questions on physiotherapy internship. The literature on clinical internship or supervision in physiotherapy is sparse (Snowdon, Millard and Taylor, 2015; Dawson, Phillips and Leggatt, 2013; Redpath et al., 2015). As clinical education or experiential learning in clinical settings is common practice among health care professions such as medical, nursing, and allied health professions, the search was cast out wide to include all health-related professions as well. The search process was expanded to include secondary references from retrieved papers as well as cited references to explore subject connections. Nevertheless, the research focus to determine factors that influence effectiveness of clinical education and internship guided my search strategy for the literature review.

Supervised practices in healthcare are highly varied between professions, specialties, settings and countries (Cottrell et al., 2002; Fitzpatrick, Smith and Wilding, 2012). There are national requirements for clinical supervision in some countries and in certain health professions but not for others. Specific to physiotherapy internship, most of the research was conducted in Australia, Canada, UK and USA. There were some studies conducted in Saudi Arabia, Sweden and India but none in East Asian countries. No study has specifically described the structure and content of a supervision program for physiotherapists (Dawson, Phillips and Leggat, 2013; Redpath et al., 2015; Pearce et al., 2013). Hall and Cox (2009) suggested that physiotherapists had different interpretations of clinical supervision and were confused about its purpose.

Whilst clinical education and supervision is seen as an integral component of entry-level physiotherapy education, there is still a lack of consensus of how it can be effectively implemented (Rapport et al., 2014). The wide differences in practices, governance and regulation of clinical supervision in physiotherapy seen globally are testament to this fact.

### *Practices and Regulation in Different National Contexts*

Clinical education or supervisory practice in physiotherapy is highly variable throughout the world. In America alone, the length of clinical education varied widely ranging from 20 to 55 weeks (Sass et al., 2011). There is no requirement for physiotherapists in America to engage in a period of supervised practice or internship after graduation either (Threlkeld and Paschal, 2007). In the UK, there is requirement for 1000 hours of clinical placement training in the physiotherapy programs but no requirement before admission to the professional register (Bithell, 2007). In Australia, there is no policy requirement on the amount of clinical supervision hours for entry level physiotherapy programs (Grant, 2004) as the issue is still under debate. In Sweden, there is no regulation on the extent and content of

clinical education for physiotherapy, and universities are free to decide its priority as part of course curriculum (Gard and Dagis, 2016). There are also no other formal requirements for the Swedish physiotherapists to apply for a license to practise upon graduation (Hager-Ross and Sundelin, 2007). In India, the Indian Association of Physiotherapists specifies 42 weeks of supervised clinical training (Gard and Dagis, 2016). In Saudi Arabia, a 1-year compulsory rotating internship and preparatory prerequisite courses is included in the Bachelor's degree program in physiotherapy (Alghadir et al., 2015).

Clinical supervision is recognised and supported at organizational and professional level based on its perceived benefits which include the development of clinical skills to support patient safety, professional accountability and competencies (Snowdon, Millard and Taylor, 2015; Dawson, Phillips and Leggat, 2013). However, there continues to be a lack of clear definition of clinical supervision or a model for operationalisation (Dawson, Phillips and Leggat, 2013; Snowdon, Millard and Taylor, 2016). In addition, there is significant shortage of clinical placement opportunities for physiotherapists and stress factors in clinical supervision have posed a greater threat on Canadian physiotherapists' willingness to supervise students (Hall et al., 2016) as well.

Numerous states in Australia and the National Health Service Trusts in the UK have developed principles, policies, frameworks and guidelines targeted at provision of clinical supervision of allied health professionals (Fitzpatrick, Smith and Wilding, 2012; Dawson, Phillips and Leggat, 2013). New South Wales Health has recently released a guide which includes broad principles for supervision of inexperienced clinicians (Fitzpatrick, Smith and Wilding, 2012). Fitzpatrick and colleagues suggested that the gaps remain in the absence of a cohesive policy for clinical supervision. Other researchers also expressed the lack of a clear articulation of clinical supervision policies and the mechanisms for implementing supervision (Cottrell et al., 2002; Strong et al., 2003). From a Queensland study of community allied health professionals, Saxby, Wilson and Newcombe (2013, cited in Snowdon, Millard and Taylor, 2015) found that those who practised clinical supervision within a

structured framework with clear supervision policies and documentation processes rated supervision effectiveness significantly higher than those who did not. This finding has implications for our physiotherapy internship program which underwent changes recently to incorporate curricular and structural elements as well as supervisory and documentation processes required by the regulatory authority. The concerted efforts to ensure our clinical training program has structure and form, and supervisory policies and processes are complied with may be in the right direction to optimise clinical internship.

From the reading of the literature, I have gained broader knowledge and understanding of the practices, concepts and perspectives on clinical education and supervision. This was valuable for my thinking and developing my thesis approach; in the formulation of research questions and the study design. Based upon the literature, I have attempted to integrate the key concepts and issues concerning the effectiveness of clinical internship and its optimisation. This literature review is organised here to first provide a brief introduction on clinical education (with focus on internship), its importance against the landscape of healthcare complexities, and the relevance of training effectiveness. A distillation of four key concepts from literature which showed to have impact on clinical education; namely (1) learner-related factors, (2) teacher-related factors, (3) teacher-learner relationships and (4) environmental factors, will follow suit.

## **2.1 Clinical education and its importance in healthcare**

Clinical education is described as “a way to practice didactic information in a hands-on environment” (Levy et al., 2009, p.8). The goal of clinical education in integrating theory and practice in a clinical setting is to train students in the skills, behaviours and attitudes required for professional practice (Rapport et al., 2014; Recker-Hughes et al., 2014; Patton, Higgs and Smith, 2013; Rogers, Lautar and Dunn, 2010; Levy et al., 2009). Clinical education is deployed across many health care professions including physiotherapy. Clinical *internship* for healthcare professionals is a crucial component in the continuum of healthcare education where it transits a graduated

student or intern from undergraduate learning to full-fledged independent practice. The application of knowledge and skills, the impartation and inculcation of values, attitudes and professional behaviour are critical in this formative period in the development of the intern or beginner practitioner. Clinical internship or synonymously clinical placement education is crucial for developing clinical and critical thinking skills for initial novice training as well as skills to engage with later on in career development and lifelong learning (Patton, Higgs and Smith, 2013; Kell and Jones, 2007).

Clinical supervision of the novice by an experienced practitioner is recognised as important in the learning and developmental trajectory of the health professional. Characteristics, behaviours and skills of instructor (Levy et al., 2009) and trainee (Plack, 2008; Healey, 2008) appear to be of significant importance in enhancing or hindering the student learning process. The community of practice in which the novice practitioner is immersed in plays a crucial role as well as s/he learns from other practitioners and through the contextually grounded experience (Black et al., 2010; Plack, 2008).

Clinical education for health professions has been evolving and necessarily so with the shifts in patient care models, disease trends, clinical practices and technological advancements. These shifts present new challenges in the practice environment. In addition to changes in the macro ecosystem, novice physiotherapists are inundated with new and diverse sources of learning which include evidence-based principles and practice (versus theory); communication with patients, caregivers and other healthcare practitioners; and clinical systems of the organization. These factors and forces may influence the trajectory of professional development for the novice practitioner (Black et al., 2010).

Whilst internship or clinical supervision of the novice is recognised as important, existant literature suggested the lack of evidence of a superior or preferred model for clinical education of physiotherapists (Rapport et al., 2014; Dawson, Phillips and

Leggat, 2013). No study has described the structure and content of an ideal clinical supervision model for physiotherapists (Redpath et al., 2015; Fitzpatrick, Smith and Wilding, 2012). From a local perspective, there is also lack of research and information on critical factors that influence the efficacy of clinical internship, or how well supported physiotherapy interns are in their initial years of professional development.

## **2.2 Training effectiveness of Internship Programmes**

Training effectiveness of a clinical education program refers to the extent to which a set of specific goals or objectives for the training are met. Effective and efficient models of clinical education should produce the intended benefits such as: (1) trainees achieve clinical competence and self-confidence through facilitated training (Rodger et al., 2008) and (2) trainees are optimally prepared to be 'work-ready' for professional and independent practice in an increasingly challenging and complex health environment (Rapport et al., 2014). Ernstzen, Bitzer and Grimmer-Somers (2009) proposed that the most effective teaching and learning activities in the clinical milieu were demonstrations of patient management, discussion, feedback and formative assessment all centred on physiotherapy care for patients. They found that students valued teacher-led demonstrations of patient management, and perceived their learning to be active and optimal by performing the demonstration. Besides hands-on learning and the transfer of skills, inculcating the attitudes to professional and ethical practice is fundamental too (Rapport et al., 2014). Other than individual factors associated with the learner and/or the teacher, there are also situational influences that impact training-related motivation and training effectiveness. Patton, Higgs and Smith (2013) suggested that the issues of increasing numbers of physiotherapy students and interns to train, the availability of qualified clinical supervisors, administrative policies and staff attitudes appeared to present as potential limitations to clinical education programs and their effectiveness. Finding time for clinical supervision appeared to be the key impediment to effective supervision of physiotherapists in an Australian public health service (Snowdon, Millard and Taylor, 2015). Sellars (2004) also reported the inability of physiotherapists to take time for supervision due to heavy workloads, busy

schedules and staff shortages. Time issues was similarly identified by Sass et al (2011) as the primary obstacle to achieving ideal clinical education; specifically, productivity standards set by administration often impede pre-planning and implementation of clinical education activities.

Clinical education and supervision is recognised as integral to preparing physiotherapists for entry into professional practice but the issues associated with effective clinical teaching and learning are multifactorial and complex ((Hall et al., 2016; McCallum et al., 2013; Currens and Bithell, 2000). The next section describes in greater detail the key concepts distilled from the literature of factors that have significant impact on clinical education and internship.

## **2.3 Themes from literature on factors influencing clinical education**

### **2.3.1. Learner-related factors**

Conventionally, the learner is the 'actor' at centre-stage on whom education is imparted to; knowledge, clinical skills, values, professional attitudes. Therefore, traditionally, more focus is placed on the teacher as the 'provider' of education (Kell and Jones, 2007). However, Kell and Jones (2007) proposed that a broader view of teaching is needed, and suggested a shift from a teacher-oriented knowledge-based transmission to learner to a learner-needs approach of continuous development.

Logically, the learner as part of the education equation must play an active role in the learning process (Sass et al., 2011; Billett, 2001). However, it has not been well studied if certain characteristics of the learner contribute significantly to the effectiveness of the clinical education process. Learning approaches appear to be better studied based on the literature retrieved that described different approaches how learners acquire knowledge and skills during clinical education experiences (Newble and Entwistle, 1986; Healey, 2008; Patton, Higgs and Smith, 2013). By understanding how the learner learns and the effectiveness of different learning



approaches, teachers can perhaps come up with better strategies to facilitate the clinical education process to better prepare graduates for the challenges of today's health care environment (Healey, 2008). The salient concepts on learning theories/approaches, learning styles and learner characteristics distilled from literature are presented here.

#### (a) Learning theories/approaches

##### *Workplace learning*

The constructivist learning theory emphasizes the importance of 'learning in context' where working directly with real patients have the greatest influence on integrating classroom and clinical knowledge and developing clinical reasoning in a deep manner (Healey, 2008). Real patients give students the context and experiences with clinical information that is meaningful, motivating and immediate (Healey, 2008). Workplace learning provide the unique and complex context of multifaceted learning (Patton, Higgs and Smith, 2013; Billett, 2001) influenced by complex negotiation about knowledge use, roles and processes and engagement. The facilitation of learning by experienced practitioners or teachers in the unique and complex contexts of clinical practice settings to develop deeper processing of knowledge (Patton, Higgs and Smith, 2013; Healey 2008) is therefore particularly salient.

Deep learning approaches during clinical education experiences are thought to enhance student understanding and learning, and development of professional practice capabilities (Patton, Higgs and Smith, 2013) which may better prepare graduates for entry to professional practice. A learning approach is described as a function of learner characteristics and teaching factors. Of the three approaches to learning; surface, strategic and deep, researchers have posited that deep approaches lead to enhanced level of understanding and higher learning outcomes and academic performance (Healey, 2008; Newble and Entwistle, 1986). Healey (2008, p.49) characterise deep learning approaches by "students who actively seek to understand the meaning in what they are learning, relate and organize ideas into a complete whole, and are critical in analysing the evidence and their decisions".

Healey (2008) investigated the perspectives of students and clinical instructors on factors that promoted students deep-learning during clinical education experiences. He found that (1) challenging patient interactions and complex patients provided a rich context for student learning, (2) clinical instructor and the clinical learning environment are essential to facilitate deep learning approaches, and (3) students' active engagement in doing and reflecting, self-assessing and directing their learning and development were instrumental in learning patient care in a deep manner.

According to the constructivist theory, the learner must be active participant of the learning process. The learner enters the learning situation with an existing set of beliefs, values and new learning is assimilated within these prior constructs. Constructivist (or student-centred) approaches include problem-based learning, case study methods, experiential learning, and reflective practices. Teachers and environmental factors may influence deep approaches to learning during clinical education experiences (Healey, 2008).

### *Social learning*

There are challenges that the learner may face in their interaction with real patients especially complex and challenging ones. Teachers therefore play a crucial role in stimulating experiential construction of professional knowledge and promoting deep learning in their students. A socially and professionally safe environment including the relationships with clinical supervisors and other healthcare workers also influence the learner's construction of individual frameworks of patient care (Healey, 2008). Patton, Higgs and Smith (2013, p.495) proposed that "learning is simultaneously an individual and a social activity". Learning occurs in a context, and learning outcomes is dependent on the social context in which the learning occurs. The interaction between an individual and the environment has the potential to facilitate or inhibit student learning. The social context of a clinical environment in the practice community is typically complex and dynamic as it is located in the webs of

social connections and concurrently influenced by physical, temporal, situational dimensions of the environment (e.g. the number of patients, competing priorities in the ward).

Based on social theories of learning by Vygotsky (1978), the process of skill acquisition that individuals undertake is influenced largely by the guidance of a more capable or experienced person. This concurred with the findings of Ernstzen, Bitzer and Grimmer-Somers (2009) in which physiotherapy students valued the contact and collaborative learning events with their teachers and perceived these experiences as most effective. In physiotherapy clinical education experiences, the more capable or experienced person could be the clinical supervisor or more experienced physiotherapist colleagues. Rogoff (1990 cited in Patton, Higgs and Smith, 2013) proposed that the social theories of learning should broaden our lens to include other 'contextual guides' that are embedded in the practical and daily routines of everyday life. These individuals capable of providing guidance include other healthcare professionals as well as patients and other students undertaking placement activities within the workplace. There is evidence to suggest that social relationships play a key role in guided workplace learning (Black et al., 2010). The quality of learning and guidance the intern achieved during clinical placement may be influenced by the trainee and supervisory relationships. Clinical supervisors or educators are attuned to the learner's experiential learning journey and could provide explicit guidance by facilitating the intern's learning through guided participation. Environmental factors such as access to contextual guides and relationships, too, have bearing on facilitating the development of the intern's practice capabilities and shaping their learning. Novice practitioners have described the informal relationships with co-workers in the practice community to have served as supports and enhanced their learning in the first year of practice (Black et al., 2010).

### *Situated learning*

Situated learning focuses on understanding learning contexts rather than individual learning styles where practice knowledge and skills are learned in authentic contexts

through active participation at the workplace (Patton, Higgs and Smith, 2013). Situated learning theories provided further understanding of the importance of the learner's increasing levels of participation and engagement in increasingly important workplace activities to a standard (quality and quantity) accepted by the profession's community of practice (Patton, Higgs and Smith, 2013). The learners' skill in practice and identities are developed through participation in the lived world of everyday activity, direct guidance they access and social interactions at the workplace (Billett, 2001; Patton, Higgs and Smith, 2013). The intern's learning trajectory is dynamic, constructed progressively towards full membership in the profession. Social learning and situated learning underlines the relevance and importance of clinical education contexts in clinical training (Patton, Higgs and Smith, 2013).

### *Peer-assisted learning*

Peer-assisted learning appears to gain more widespread application in higher education and the clinical setting in the past decade (Sevenhuysen et al., 2015). The concepts of peer learning lie within social constructivism whereby learning is viewed as a social phenomenon (Currens and Bithell, 2003). New understanding and new knowledge are facilitated through social interactions / discussions and challenging assumptions among learners when working together; in other words, learning with and from one another. Gard and Dagis (2016, p.385) noted the peer-assisted learning approach among Indian physiotherapy students "reduce the students' anxiety, enhance their sense of safety in the learning environment, reduce educator burden and build professional skills" to a higher extent compared to the Swedish traditional one-to-one learning approach. The findings concurred with the study by Sevenhuysen et al (2015) on Australian physiotherapy students and clinical educators. It was perceived that peer-assisted learning 'force' students to be active learners through reduced dependence on the clinical educator and heightened roles in observing practice and making evaluative judgments about quality of practice. Peer-assisted learning appears useful early on in clinical placements as learning scaffolds towards independent practice, but it cannot replace educator-facilitated learning such as feedback, guidance and modelling (Sevenhuysen et al., 2015).

In synthesising the different theories of learning, the key idea that I draw from them is the duality of learning; individual and social. Deep learning by the individual is crucial to integrate the data and information received in a highly complex clinical environment. Simultaneously, the engagement with different stakeholders such as doctors, nurses and allied health professionals in the social context of a dynamic clinical setting and the community of practice is necessary for continuous learning and capability development. Health care delivery is hardly done in isolation; there are many interactions and consultations among healthcare members in the care process for each unique patient. Because of high interdependence on the expertise of multiple health disciplines, care processes and delivery can be highly intricate. Workplace learning as part of and within the bigger health system is necessarily important in delivering optimal patient care. Effective approaches to 'learning in context' for the learner are therefore crucial.

#### (b) Learning styles

Learning style refers to a person's behaviour that reflects a distinct approach to learning (Newble and Entwistle, 1986). "Learning styles are seen as the way individuals prefer to process new information, and strategies they adapt for effective learning" (Milanese, Gordon and Pellatt, 2013, p.147). Mountford, Jones and Tucker (2006) found that Australian physiotherapy students prefer Reflector and Theorist learning styles, suggesting that they place greater emphasis on reviewing and thinking of the learning cycle rather than experiencing and planning. They would prefer to observe and reflect rather than take action and perform a practical task. The authors suggested that identification of students' learning styles and behaviours may be valuable in eliminating learning disadvantages experienced by students and help address their deficits in clinical skills and knowledge. Clinical supervisors, through curriculum design and teaching methods can challenge them to develop in planning and action skills in order to succeed in the clinical environment.

Zoghi et al (2010) found that Australian physiotherapy students preferred the Converger learning style (based on Kolb Learning Style Inventory); a style characterised by abstract conceptualization (thinking) and active experimentation (doing) for which a problem-based approach would be suitable in providing opportunities for deductive reasoning and problem solving. Milanese and colleagues had similar findings with final year physiotherapy students from Queensland, Australia that suggested their preferences for learning to come from a theoretical perspective, allowing them to think about the clinical issue before experiencing it (Milanese, Gordon and Pellatt, 2013). They do not like being thrown into the 'deep end' with real patients in the clinical environment until they have gained experience through learning.

Black et al. (2010) found that the most powerful source of learning for novices was 'learning through doing' in the authentic workplace environment with all associated issues; whether positive or negative. The authors noted that novice physiotherapists encountered challenges in communication and understanding the meanings that patients or others hold. Whilst physiotherapists may have preferred learning styles, educational theorists have long emphasised the critical importance of authentic experience, encounters with real problems and reflection of these experiences for learning and professional growth (Black et al., 2010). Novice learners will have to adapt their learning styles as well to optimise and benefit from their clinical learning experiences.

### (c) Learner characteristics and capabilities

Learner characteristics refer to attributes or traits that the learner possesses including values and beliefs that s/he embraces. Learner capabilities refer to aspects such as prior knowledge, skills and abilities. This is distinguished from learning styles described earlier that refers to the learner's behavioural aspects toward learning, which may develop or change over a period of time.

Roberts (2001) suggested that the learner responsibility is to learn, and hence the motivation and commitment of the learner is an important starting point. Students are better able to learn deeply and construct individual frameworks of patient care when they are actively engaged in doing and reflecting, seeing the big picture, and self-assessing their strengths and weaknesses (Healey, 2008). By engaging actively in experiencing and reflecting, the approach facilitates learning in a deep manner. Clinical supervisors suggested that seeing the big picture or taking a holistic perspective of patient care promoted deeper understanding, and is one of the most important aspects in patient care that students needed to learn. Clinical supervisors also expected students to be willing to learn and to take responsibility for directing their learning; to be able to self-assess their strengths and identify areas that needed improvement. Sass et al (2011) noted that students who did not have prior exposure to direct patient care, who were not prepared or who were not willing to study outside of clinic hours were hindered in their entry-level clinical performance. Hall and colleagues proposed that student-related factors such as academic preparation, student's attitude and professional behaviour, influence the outcome of the clinical placement experience (Hall et al., 2016). In their study, the Canadian physiotherapists felt that students were not academically prepared for complex caseloads.

Dewey (1933 cited in Patton, Higgs and Smith, 2013, p.500) suggested that reflective engagement in professional practice is key for development. Reflection and reflective thought is a thinking process which is essential to the process of learning and problem solving in physiotherapy practice. He proposed that reflective thought is active, careful, directed at transforming a situation of confusion, obscurity or doubt into a situation of clarity and coherence in the light of supporting evidence and conclusion to which it is directed. Barnett (1997 cited in Patton, Higgs and Smith, 2013) argued that professional practice requires critical thinking, which is beyond reflection, for action. Clinical supervisors will need to assess and facilitate learner's capabilities in reflection and critical thinking in their learning experiences as they engage in complex and dynamic practice environments. Plack (2008) found that student attributes or personality traits that facilitated learning in the clinical setting included adaptability, initiative, motivation, persistence and receptivity. On the same

note, clinical supervisors can inspire and encourage student behaviours and attitudes that promote or align with these attributes to facilitate development of professional practices.

### **2.3.2 Teacher-related factors**

The teacher is a key 'actor' in the education process as they help in the student learning development from dependence upon classroom facts to the reality of independent clinical practice. Their responsibilities include guidance in clinical reasoning, supervision of applied skills and techniques in physical therapy, inculcating professional attitudes and behaviour (Silen et al., 2011; Black et al., 2010; Kilminster and Jolly, 2000). The role of the teacher as a guide, educator, assessor, supporter and role model for the learner (Cole and Wessel, 2008; Winstanley and White, 2003; Roberts, 2001) is important during this transformative phase. In the literature, numerous terminologies are used for the teacher; clinical educator, clinical supervisor, clinical preceptor, clinical instructor, they are taken to mean the same. I will be using the terms clinical supervisor and clinical educator interchangeably in my dissertation. Teacher-related factors that may impact students' learning development include the supervisors' personal attributes and capabilities (Emery, 1984; Cross, 1995; Curtis, Helion and Domsohn, 1998; Bennett, 2003; Lauber et al., 2003; Kelly, 2007; Plack, 2008; Recker-Hughes et al., 2014), their perceived conceptions of learning and teaching in practice (Kell and Jones, 2007; Vaughn and Baker, 2001). The key aspects on clinical supervision, teaching pedagogies, and teacher characteristics are detailed here.

#### **(a) Clinical Supervision**

Supervision is a complex activity, and different definitions have been offered according to the varied understanding of the purposes and functions they embodied. Most definitions emphasise professional ethos such as promoting professional development, ensuring patient / client safety, and supervisory functions to include normative, formative and restorative aspects (Kilminster and Jolly, 2000).



Clinical supervisors who supervise interns' training during their practice placements have a critical role to play in supporting and driving clinical education experiences that interns must undertake to develop their competence for professional practice. Winstanley and White (2003) and Roberts (2001) proposed that the supervisor's role is to facilitate the trainee's educational and personal growth, and development of clinical independence. This has concurrence with Kilminster and Jolly's suggested definition of clinical supervision as the "provision of monitoring, guidance and feedback on matters of personal, professional and educational development" in the context of care of patients (Kilminster and Jolly, 2000, p. 828). Cole and Wessel (2008, p.173) found that physiotherapy students in an introductory clinical placement perceived that they learn best when their clinical supervisor "involves them directly in patient care, prepares them for these encounters, confirms their knowledge and skills, and provides challenging experiences." Levy et al. (2009) suggested that direct supervision; whereby the supervisor takes responsibility for managing, educating and supporting the trainee, have produced a positive effect on patient outcome.

Christie, Joyce and Moeller (1985) found that both occupational therapy students and supervisors similarly expressed effective supervision as the most critical component of the fieldwork experience. Wimmers, Schmidt and Splinter (2006) found in their study with medical students that the quality of student supervision was of greater importance for clinical education experience than increasing the number of patient encounters. This was observed likewise by Silen et al. (2011) that allowing clinical educators dedicated time for supervising students was crucial in order for instructors to focus on observing student performance, develop clinical reasoning, give feedback and support the experiential learning. Although there are inadequate theoretical accounts or models of physiotherapy clinical supervision in the published literature, there is some evidence to suggest that effective supervision is a very important factor for clinical training (Kilminster and Jolly, 2000; Silen et al., 2011). Kilminster and Jolly (2000, p.835) further suggested that the "quality of supervision relationship is probably the single most important factor for the effectiveness of

supervision, more important than the supervisory methods used". The primary role of the professional educator is to facilitate the learning process as an educational leader by ensuring quality teaching-learning, whilst the learner takes responsibility to learn (Roberts, 2001).

The task of clinical supervision is far from menial, and the selection of suitable staffs for such a responsibility is intuitively of central importance. Nonetheless, the selection of clinical supervisors to perform the role of educators is not without issues. Rodger et al. (2008), in their report on clinical education and practice placements from an international perspective and across four allied health professions (in audiology, occupational therapy, physiotherapy and speech pathology), identified the following numerous issues concerning clinical educators and clinical supervision;

- a. They are often selected based on availability or seniority rather than demonstrated abilities, skills and commitment
- b. There is lack of guidance on role expectations as evaluator / assessor
- c. They are often untrained for the role and responsibilities of the clinical supervisor
- d. Expert clinicians did not necessarily make great clinical supervisors
- e. Rewards, recognition and supports for clinical supervisors are generally lacking

In the light of these findings, insights into understanding the purposes of supervision, how it can be effectively delivered, and the skills and qualities effective supervisors need to possess were deemed to be useful to inform practice. Issues and conclusions discussed in this report by Rodger et al (2008) on clinical supervision such as selection, role expectations and skills equipping of clinical supervisors appear to be of relevance to my educational environment. I intend to formulate my research sub-questions to include these aspects and have them evaluated in my setting for their applicability and impact.

#### (b) Teaching pedagogies

The literature suggested that expertise that contribute to effective clinical instruction were instructional (Bennett, 2003; Lauber, 2003; Emery, 1984; Tang, Chou and Chiang, 2005), interpersonal (Bennett, 2003; Lauber, 2003; Emery, 1984, Jarski, Kulig and Olson, 1990; Tang, Chou and Chiang, 2005) professional (Bennett, 2003; Kelly, 2007; Jarski, Kulig and Olson, 1990; Tang, Chou and Chiang, 2005) and evaluative (Bennett, 2003; Lauber, 2003) skills. In the study findings of Healey (2008), clinical supervisors' interpersonal and teaching skills were most valued by students in promoting their learning. Buccieri, Pivko and Olzenak (2013) postulated that the expert clinical instructor possesses both expert clinical practice skills and expert teaching skills. They suggested that the expert clinical instructors are highly reflective and acquired expert teaching skills through their own self-reflection and assessment of their effectiveness as clinical instructors. The active engagement of clinical instructor and the student in reflection *for*, reflection *in* and reflection *on action* in the teaching episode drives student learning optimally (Buccieri, Pivko and Olzenak, 2013).

Cole and Wessel (2008) argued that clinical supervisors should use the more directive strategies (modelling, coaching and scaffolding) with junior students as they are initially dependent on their teachers for their learning needs. Weidner, Trethewey and August (1997) suggested that clinical instructors must match their clinical teaching skills and supervision process to the trainee's level of understanding and training. Harrelson and Leaver-Dunn (2002) advocated that the clinical instructor role should be as a facilitator rather than a content expert and engaging and supporting the student in the experiential learning process. Swann (2002) emphasised feedback as effective communication to create the positive learning environment for students. Feedback helps students to refine their clinical skills and behaviours and develop self-esteem. The author suggested that the clinical environment is ideal for feedback because of the experiential nature of the setting. Healey (2008) proposed that when clinical supervisors asked questions and give feedback on performance, deep learning is facilitated as students integrated their knowledge and critically examined their practice.

### (c) Link between teacher's conception of teaching and teaching in practice

Some authors have drawn attention to the importance of the meaning teachers attach to teaching; the role and purpose of the teacher (Richardson, 2005). Teaching in practice is an approach to teaching or the strategy the teacher adopts to deliver the teaching (Kell and Jones, 2007). It is influenced by the teaching context but underpinned by the teacher's conceptions of teaching; "teachers who hold a particular conception of teaching will ascribe an analogous conception of learning in their students" (Kell and Jones, 2007, p.280). The teacher's conceptions of teaching which include views about assessment procedures and their ability and desire to motivate and support their learners, can affect the students' learning development and outcome. Teachers changed their teaching in practice according to their perceived needs of their students as well the teaching environment. In an environment of high caseload, a fact-based approach to teaching may be adopted. Vaughn and Baker (2001) suggested that poorly motivated or inexperienced teachers may also offer teaching-learning experiences that reflect their own experiences or comfort zone of practice. The teachers' awareness of and views of their disciplines or domain expertise as part of a broader scope of the real practice is similarly important; their conceptions of teaching based on narrow or broad holistic views have consequences on their teaching approach. For example, a narrow view may restrict teaching-learning to a more teacher-focussed knowledge-based transmission experience for the learner (Kell and Jones, 2007). With the shift to evidence-based practice and advent of continuing professional development and lifelong learning, there appears to be a need to move from a teacher-centred approach to teaching to a learner-centred learning approach. In Kell and Jones (2007), physiotherapy students were experiencing clinical education that was predominantly underpinned by a knowledge transmission conception of teaching (Coach approach), where focus was on imparting information and subject knowledge. These research findings are interesting and the implication for my study is to seek out the conception of our clinical supervisors toward teaching and supervising; whether they are more concerned with transmission of knowledge and skills or focussed on facilitating growth and development of the intern according to learner deficiencies and needs.

#### (d) Teacher characteristics and capabilities

The first and initial years of practice for the physiotherapist are a time of both challenge and change as the student emerges as a professional practitioner (Black et al., 2010). The professional learning and development that takes place is a process of change for the intern as well as an enculturation into the community of practice. Interns face many challenges as they transit from idealism to the reality and complexity of the workplace. This formative period would see the need for development of professional competence, increased autonomy, responsibility and greater accountability. Arguably, teachers play a central role during this formative process. There is need for clinical educators to facilitate the professional identity development of interns, guiding them in developing a patient-centred approach in terms of interactive and reflective skills for clinical decision making (Black et al., 2010).

Recker-Hughes et al (2014) suggested that the clinical instructor's competence and confidence as a teacher can influence the quality of the student's experiential learning. Clinical instructors, therefore, needed to be skilled from novice to expert clinical teachers to cultivate high quality clinical education experiences in the facilitation of student learning. The authors proposed that firstly, clinical instructors must possess baseline qualifications and these include being a licensed physiotherapist who practises in a legal and ethical manner; demonstrates competence as a clinician, demonstrates a desire to educate students, and displays evidence of teaching skills. Secondly, the clinical instructor will need to develop expertise in their teaching roles through individual motivation and action. Recker-Hughes et al. (2014) proposed that the essential characteristics of an effective clinical instructor were:

- Interpersonal/communication skills
- Professional behaviours
- Instructional/teaching skills
- Evaluation/performance skills

There is concurrence with Emery (1984) who described the effective clinical instructor to possess characteristics of effective communication, interpersonal relations, professional competence and teaching skills. Lauber et al. (2003) found that both program directors and clinical educators from athletic training education programs ranked the clinical educator behaviours in the following order of importance: professional, instructional, interpersonal and personal. The findings of Platt Meyer (2002) also pointed to professional attitudes, professional actions and communication skills to significantly improve clinical instructor effectiveness. Over the passage of three decades, aspects such as interpersonal / communication skills and professional behaviours of the clinical supervisor continued to rank highly in influencing training effectiveness. Buccieri, Pivko and Olzenak (2013) suggested that clinical instructors who reflected on their teaching techniques of others, identify needs and approaches to integrate into their teaching style was key to developing their skills and improving their effectiveness in clinical teaching.

Levy et al (2009) suggested that supervision is enhanced with highly skilled clinical educators who are adaptive and responsive to students' skill level and learning style across variable clinical situations, are capable in engaging students and fostering higher-level thought processes, and timely and specific in providing formative and summative feedback to students. There is concurrence with Healey (2008) and Emery (1984) who found that teachers with learner-centred beliefs promote deep learning approaches in their students, playing a crucial role in stimulating student intellectual growth and development.

Despite the importance of clinical education and clinical teachers, the characteristics and qualities of effective clinical teaching in physiotherapy remain poorly defined (Emery, 1984). The process of clinical instruction is widely inconsistent influenced by the contexts they take place, and students' learning experiences are therefore varied (Kelly, 2007; Emery, 1984). Their perceptions of teacher characteristics and behaviours that impact them may differ in the level of importance.

Curtis, Helion and Domsohn (1998) studied student perceptions of effective clinical instructor characteristics, behaviours and skills and found the following aspects to be of importance (in ranked order); mentoring, professional acceptance, nurturing and modelling. Supervisor behaviours that were helpful included explanation, demonstration, constructive feedback and confidence-building actions such as positive reinforcement. Behaviours that hinder learning were supervisor unavailability, missed learning opportunities, poor interaction styles, unprofessionalism and poor administrative skills. Bennett (2003) found that clinical educators believed that the most important abilities / qualities of a clinical educator were their approachability, enthusiasm and good communication skills. These attributes were similar to the findings of Cross (1995). Other researchers have proposed characteristics of effective supervisors to include, in addition to good teaching and interpersonal skills: enthusiastic, dynamic, energetic, competent, knowledgeable (Levy et al., 2009). Plack (2008) added to the list of personal characteristics: open-mindedness, mentorship, caring, respectful and support, and making time for students. Kelly (2007) described the exemplary clinical instructor as a teacher who encouraged active learning, reflection and critical thinking in students.

The list of important teacher characteristics and abilities described in these studies are wide ranging and non-exhaustive. Perhaps the characteristics of clinical supervisors that are valued as especially important are those qualities that support and encourage the formative process of the learner. Additionally, the findings are contextual as they were conducted in their specific settings in different time periods. Whilst the list of teacher characteristics appears to make sense intuitively, my study could perhaps unfold the key characteristics of the teacher that are directly related to their effectiveness in clinical supervision in my local setting.

In assessing student's perceptions of effective clinical teaching, Kelly (2007) also found that students and teachers differ in opinion on the most and least important characteristics of effective clinical teachers. However, they agree that "the best clinical teachers have sound interpersonal skills, the ability to give feedback, are clinically competent, and know how to teach" (Kelly, 2007, p.887). Morren, Gordon

and Sawyer (2008) found no association between clinical instructor characteristics (in terms of educational degree, professional experience, certifications, credentials, and professional organization memberships) and students' assessment of clinical instructor effectiveness. Students did not perceive the more qualified clinical instructor to be more effective and providing a more satisfying clinical experience. This is despite the expectation that measures of expertise (e.g. clinical or specialist certifications) would improve clinical instruction and students' satisfaction. However, the study did suggest that clinical instructors who went through a clinical instruction training to be credentialed showed better scores in four instructional skill items; gives timely feedback, clearly explain student responsibilities, integrates student learning styles and provides constructive formal evaluation. The authors, however, opined that it would be inappropriate to attribute the credentialing training for the stronger instructional skills as other factors such as personality and behavioural skills, and instructional skills learned and practised through experiences and mentorship may contribute to excellent skills held by effective instructors.

As a concluding note on the impact of teacher characteristics and capabilities on effective clinical supervision, Johnson-Farmer and Frenn (2006 cited in Kelly, 2007, p.887) suggested that the process of becoming an excellent teacher is a dynamic process requiring the active engagement of students and the teachers. The excellent teacher is student-centred, knowledgeable (not just clinical and pedagogical, but political and self-knowledge), deploys multiple teaching strategies, provides timely, balanced and respectful feedback, communicates expectations and outcomes clearly, and draws students into action learning.

### **2.3.3 Teacher-learner relationships**

Student-teacher interaction research (Roberts, 2001; Plack, 2008) has identified the important relation between dominant behaviours and the positive impact on student learning outcomes such as attitudes and behaviours, and achievements. Wubbels, Levy and Brekelmans (1997) suggested that the more dominant the teacher



(directive and in control of the communication), the more the students achieve (in learning outcomes). Although the student-teacher connection is assumed to foster learning and growth of the student and teacher, there is a paucity of research to establish these claims.

#### *(a) Relationships that enhance learning and growth*

The quality of the teacher-learner relationship was proposed to be the most important effective supervision factor (Kilminster and Jolly, 2000; Levy et al., 2009). Faugier (1998 cited in Maringer and Jensen, 2014) identified elements of the supervisory relationship that supported the learning and growth of newly qualified staff such as: generosity, trust, sensitivity, thoughtful/thought-provoking and practical. Gard and Dagis (2016) observed that Swedish and Indian physiotherapy students rated their supervisory relationship as positive and satisfying as they perceived that their supervisor and the clinical team supported their learning, and that equality and mutuality were present in their interaction and relationships during the clinical practice. In Healey's (2008) study, students and clinical educators reiterated the importance of a positive and comfortable relationship between student and teacher to promote a deep approach in student learning. A good relationship between the student and teacher provides the socially and professionally safe environment where students felt safe to ask questions, take risks and develop their confidence and independence in learning which were deemed crucial for their development. The clinical educators' role in facilitating and supporting through asking questions and feedback rather than 'doing for' the student was recognised as key to student learning experiences. Pearce et al (2013) suggested that a supervisory relationship that provides support and trust for the practitioner to undertake reflection on questions, decisions made, clinical interaction and practice helps in learning and progressing the practitioner.

Continuity between learner and teacher has been explored as a strategy to enhance clinical teaching and learning. Longitudinal relationships in contrast to brief relationships allow teacher and student to appreciate each other's skills and

interpersonal style, for the teacher to adjust teaching to student's learning needs and for student to develop under the teacher's guidance. Hauer et al. (2012) found that students in longitudinal relationships felt respected as learners and partners, and experienced collaborative interactions focused on their professional development. Within trusting interactions with teachers in a longitudinal relationship, students are supported and challenged, and gain confidence to influence their own learning. Longitudinal relationships are generally less hierarchical, and teacher expectations evolve in tandem to student's increasing clinical competence and responsibility of patient care. The findings of Hauer et al. (2012) suggested that students' clinical learning experiences may be enhanced by continuity between learners and teachers through structured longitudinal attachments to clinical supervisors.

#### *(b) Matching learning style preferences and teaching methods*

People differ in their approach to learning; they have unique learning style preferences to process new information and adopt strategies to achieve optimum learning (Zoghi et al., 2010). The common assumption is that students' learning styles should be associated with their preferences for certain teaching methods and instructional activities (Olson and Scanlan, 2002). It is believed that by matching the educational experiences of healthcare professional students with their preferred learning styles that positive energy between educator and student can be generated and optimal learning experience for the students is attained (Arthurs, 2007). Cole and Wessel (2008) proposed that discussion between the clinical supervisor and the student about learning needs and expectations would be an important strategy to enhance the student's learning.

One of the notable instruments of learning styles is the Kolb Learning Style Inventory (K-LSI). It is based on Kolb's theory of experiential learning which has been around for more than 30 years and widely used with health care students (Zoghi et al., 2010). Based on Kolb's theory, learning is a cyclic process involving 4 modes: concrete experience (feeling), reflective observation (watching), abstract conceptualisation (thinking) and active experimentation (doing). Kolb theorised that

combinations of the 4 modes produce 4 learning styles of how people prefer to learn: Converging (think and do), Accomodating (feel and do), Diverging (feel and watch) and Assimilating (think and watch). Using the Kolb Learning Style Inventory as the assessment instrument, Zoghi et al. (2010) found that physiotherapy students preferred the *Converger* learning style most frequently, which is characterised by abstract conceptualisation (*Thinking*) and active experimentation (*Doing*). Numerous researchers; Katz, Heimann, Hauer, Bowman and colleagues found similar results for physiotherapy students with more showing preference for the *Converger* style (Zoghi et al., 2010). *Convergers*, for example, prefer demonstrations, simulations, case studies, computer-aided instruction (Arthurs, 2007). Milanese, Gordon and Pellatt (2013) found the preferred learning styles of undergraduate physiotherapy students to spread uniformly across the three learning styles of *Converging*, *Assimilating* and *Accommodating*, with *Diverging* style as the least preferred style. They suggested that students least prefer to develop their learning from experiencing the scenario in the clinical environment; that is, in front of a real patient, and preferred learning from a theoretical perspective first; to think about the problem / scenario, before experiencing it. Students also did not like to be thrown into the 'deep end' with patients. Using the Gregorc Style Delineator instrument, Olson and Scanlan (2002) found over a third of physical therapist students to exhibit a dual learning style (prevalence in *Concrete-Sequential* orientation) and thought that this could exert a confounding effect on the relationships between learning styles and preferences for teaching methods and instructional activities. Maghraby and Alshami (2013) found 59% of physical therapy students' rated *Concrete-Sequential* learning style the most preferred, consistent with 'hands-on-training' as the most preferred teaching method. Overall, there was high percentage of students with mixed learning styles, and the authors suggested it was indicative that these students could accommodate multiple teaching methods.

An awareness of the unique learning styles of learner will allow the educators to adjust their teaching approaches to best fit with the learning needs and preferences of their students (Zoghi et al., 2010; Maghraby and Alshami, 2013; Vaughn and Baker, 2001). Milanese, Gordon and Pellatt (2013, p.151) suggested that "understanding a student's self-reported learning style may provide a depth to the

teaching process". Arthurs (2007) proposed that matching teaching methods to learning styles of students maximise learning of students. However, Milanese, Gordon and Pellatt (2013) suggested the evidence is still lacking whether to support or refute the relationship between learning styles and effective teaching approaches. Peacock (2001 in Maghraby and Alshami, 2013) suggested that the lack of compatibility between student learning styles and teaching styles of teachers lead to student frustration and has a negative impact on learning. Maghraby and Alshami (2013) recommended that physiotherapy educators should apply a balanced variety of teaching strategies and methods to accommodate the different learning styles of students, and to require students to be active participants of their learning as well in order to maximize learning and to meet the demands of the challenging clinical environment.

#### **2.3.4 Environmental factors**

The clinical learning environment remains a very important resource for the development of students to entry level physiotherapists, which cannot be created in an academic environment. Unlike the controlled environments of classrooms and laboratories, the clinical setting is typically fast paced and highly complex. A better understanding of the clinical environment and the factors and influences they may have on interns or students' learning development is important as pedagogical approaches to teaching and learning in a 'live' environment are expected to be different.

##### *(a) Organizational factors*

There are many organizational and environmental factors in the clinical setting that can influence student learning outcomes. The interactive network of forces can either support or hinder student learning; they include workplace affordances (e.g. ward atmosphere and relationships with staff and supervisors), workload pressures and organizational processes.

i. *workplace affordances*

“Workplace learning is a complex and multifaceted phenomenon” (Patton, Higgs and Smith, 2013, p.495) as it is influenced by socio-cultural dimensions of workplaces, power relationships, roles and processes, engagement and acceptance in the community of practice, and other factors. Learning experiences for interns undertaking clinical placements is contextual and unique. Billet (2001) emphasised the importance interdependence played between workplace affordances and how individuals elect to participate in the work activities and guidance provided by the workplace. He proposed that “the readiness of the workplace to afford opportunities for individuals to engage in work activities and access direct and indirect support is a key determinant of the quality of learning in workplaces” (Billet, 2001, p. 209). Nevertheless, it is just as important that learners are keen to engage purposefully in the workplace.

Effective clinical learning is dependent also on the quality of workplace relationships and interactions; a collegiate one involving sharing of information, and guidance from senior and experienced therapists promotes rapport and allow interns to ‘fit in’ with the team (Chuan and Barnett, 2012). Team or collaborative models of learning appeared to be valued by students as they provided peer support, companionship and shared learning of information and transferring of skills (Currens and Bithell, 2000). Practice environments and cultures that support lifelong learning and integration and inclusion of students were of critical importance in determining the success of clinical education experiences (Hoff, Pohl and Bartfield, 2004; Recker-Hughes et al., 2014). Acceptance by staff appeared to be of importance to learners; whether staffs welcome students, try to help them out, treat them like part of the team, value their opinions, and so on (Kelly, 2007).

ii. *Workload pressures*

Hoffman and Donaldson (2004, p.448) suggested that learning, teaching and patient care are closely linked, and “learning knowledge and using knowledge were parts of the same process within the clinical context”. There are multiple tensions within the

clinical environment where clinical education takes place. These tensions included patient census, time sensitivity of the context and multiple and conflicting commitments of individuals. These contextual factors influence the effectiveness of teaching and learning. Patient census refers to number of patients, acuity and complexity of patients' illnesses and pace at which they move through the system. Increases in patient volume provide a rich supply of learning prompts and opportunities for interns to elaborate their knowledge. However, high patient census can be counter-productive to the educational process when it results in less time for reflection and elaboration and self-directed learning as patient care commitments and activities take higher priority. Role conflicts between teacher-care provider or learner-care provider continue to be the barriers to learning as a result of interruptions and fragmented episodic experiences. The patterns of learning tend to shift in response to contextual changes.

Snowdon, Millard and Taylor (2015) found that whilst physiotherapists may perceive clinical supervision as important, they did not accord it a priority amidst their other clinical demands. Sellars (2004) reported that although physiotherapists understand the importance of clinical supervision they were unable to find time to do so, and the impediments identified were heavy workloads, busy schedules and staff shortages. The same barrier to clinical supervision was faced by physiotherapists in a large Australian public health service; efficient patient care and shorter length of hospital stays take priority over making time for clinical supervision (Snowdon, Millard and Taylor, 2015).

The findings of Currens and Bithell (2000) suggested that the stakeholders' perspectives on effectiveness of clinical education are influenced by the service pressures experienced, the recognition and support from managers and clinical peers. A common concern also stemmed around competing priorities of patient care and the education process. Clinical supervisors face considerable tension as they are conflicted by opposing demands on their time to fulfil their roles as practitioners and as teachers (Currens and Bithell, 2000; Recker-Hughes et al., 2014; Hall et al., 2016). In reality, clinical supervisors may not be given a reduction in clinical

caseloads while supervising interns resulting in priority shifts or burnout. Similarly, interns may be under pressure of time to manage patients or address patient care issues at the expense of reflection, learning participation and self-directed learning.

Studies (Healey, 2008; Wimmers, Schmidt and Splinter, 2006) have shown that fast-paced workloads and productivity demands on students and clinical supervisors affect clinical learning and student learning outcomes adversely. The quality of clinical education experiences is compromised as students do not have sufficient time to engage meaningfully in reflection and clinical reasoning processes, and discussion of their clinical performance with their clinical supervisors (Wainwright et al., 2011). High patient volumes limited the time and attention given to patients and time for students to process and reflect what they were thinking and doing; this hindered the deep approach to learning (Healey, 2008). Morris (2007) found that while direct hands-on experience with patients was generally seen as positive as it developed clinical reasoning, excessive caseload and responsibility were viewed as negative by students. The benefit of students managing full caseload needed to be explored further as the student learning outcomes may be less efficacious than realised. Nonetheless, the demands of busy and high workloads appear more likely to be the feature of the physiotherapists' professional lives.

### iii. *Organizational issues and processes*

Some other organizational issues and challenges that impact interns and clinical supervisors today are: (1) limited clinical training places / opportunities (Hall et al., 2016; Milanese, Gordon and Pellatt, 2013; Bennett, 2003; Currens and Bithell, 2003), (2) insufficient trained clinical supervisors (Milanese, Gordon and Pellatt, 2013; Buccieri, Pivko and Olzenak, 2013; Rogers, Lautar and Dunn, 2010), (3) increased (work) process documentation (Hall et al., 2016; Sass et al., 2011; Currens and Bithell, 2000), and (4) actual challenges of learning/teaching on real patients in real-world healthcare practice settings (Dilworth et al., 2013; Salam et al., 2011; Ernstzen, Bitzer and Grimmer-Somers, 2009; Healey, 2008; Ohman, Hagg and Dahlgren, 2005).

Working with real patients give students the context in their learning and understanding as classroom knowledge is integrated into actual experiences and clinical reasoning which is meaningful and immediate (Healey, 2008). However, challenging patients can also cause discomfort and dissonance. Nevertheless, these experiences promoted student learning as they challenged students to think more deeply and creatively. On another note, healthcare environments in which clinical education is conducted are in themselves complex and challenging with multiple providers caring for the same patient, multiple perspectives on patient care, and hence complex decision making processes. Unplanned events often occur with patients and these can constrain opportunities to learn (Ernstzen, Bitzer and Grimmer-Somers, 2009).

In the face of such organizational constraints, innovative clinical education methods such as standardised / simulated patients have been utilised for teaching and augmenting the clinical experience for interns (Rodger et al., 2008). The emergence of information technology also holds promise in offering improved educational pedagogies to support, reinforce and extend learning in clinical settings (Gordon et al., 2000).

#### (b) Macro- environmental factors

There are major, external uncontrollable forces; termed the macro-environment, that affect the performance of clinical education. These forces include economic, legal, social and cultural forces. Examples of issues experienced in the clinical learning environment that are contributed by macro-environmental factors include fiscal and regulatory requirements, and accountability for quality of clinical education programs by training providers.

##### i. *Fiscal and regulatory requirements*

Fiscal and regulatory requirements of health care systems may pose challenges on student placements in relation to quantity (student size) and quality of clinical



education program. The clinical educator: student ratio; whether specified as a regulatory requirement or not, may influence clinical teaching.

Due to increasing demands and pressures for student clinical placements, training sites have explored alternate delivery models for clinical education such as multiple students to one clinical educator model. Some recent literature (Weddle and Sellheim, 2011; Recker-Hughes et al., 2014) suggested that the multiple students to 1 clinical educator model may be effectively implemented for integrated, short-term clinical education experiences. Students who participated in these experiences felt satisfied as they gained access to multiple philosophies of patient management and could collaborate with peers.

The 2:1 clinical placement model (two students placed with one educator) was perceived as successful by clinical educators and students (Currrens and Bithell, 2003) and has potential to enhance student learning experiences. Compared with 1:1 supervision, clinical educators felt students were less dependent on the clinical educator. Students had expressed positive comments about the 2:1 model; they valued peer discussion and reflection, peer support, and peer practice through shared learning activities. The educational benefits were attributed to peer assisted learning; the approach of learning with and from each other. Peer discussion allowed clarification of thoughts and ideas, added depth to clinical reasoning and facilitated understanding and interpretation in a mutually supportive and comfortable atmosphere (Currrens and Bithell, 2003).

The evidence from Bennett (2002) and Crouch et al. (2002) appeared to show benefits using the 2:1 model and the 3:1 model in terms of shared learning for both the students and the clinical educators. They provide different learning opportunities from the 1:1 model but are no less important for the students and educators. Crouch et al. (2002) proposed that all three placement models have a place in physiotherapy education and that their success in achieving high quality learning experiences is dependent on how well they are implemented.

Bennett (2003) proposed that a team approach to clinical supervision could perhaps be considered as a new model of supervision versus the traditional practice of a single educator supervising a single student. She suggested that physiotherapists of all grades including junior ones are capable of facilitating student learning. Team supervision would provide opportunities for students to learn from a variety of learning experiences and professionals, and simultaneously address the increasing demand for clinical placements. Other implications for team supervision in clinical education would include improving personal knowledge and teaching skills of junior physiotherapists from joint learning, encourage new or less experienced clinical educators to share the role and develop a fuller sense of responsibility, and reduce service pressures through sharing of workload. Peer consultation and sharing of experiences in the team supervision model may also bolster reflection and promote individual and professional development. The benefits of the team approach to clinical supervision extend not only to the clinical educator and student in the traditional one-to-one model but to the team of physiotherapists.

Stiller et al (2004) found that whilst the shared responsibility model was the most commonly used model of delivering clinical education to Australian physiotherapy undergraduate students, the designated clinical educator model is preferred. The designated clinical educator model was perceived to be superior to the shared responsibility model as there was increased time to devote to clinical education, improved consistency in supervision and assessment of students, and decreased levels of stress from excessive workloads for staff.

## ii. *Accountability of quality programs at clinical sites*

Health care delivery and health care systems have undergone changes, leading to additional challenges for clinical education sites to sustain their programs. There is growing concern with regard to the variability of standards and delivery of physiotherapist clinical education, and to optimally prepare future physiotherapists to

enter the work force (Rapport et al., 2014; Recker-Hughes et al., 2014). Nevertheless, physiotherapy education providers and clinical sites need to be held accountable for high-quality clinical education experiences and learning environments or cultures which are essential components for student learning in the preparation for professional practice. As key stakeholders, clinical sites have responsibilities to ensure excellence in clinical education by appointing a centre coordinator for clinical education, providing support to clinical supervisors and promoting their development as clinical educators, and providing resources and time for clinical supervisors to meet with students to facilitate effective learning and good patient care outcomes. Sass and colleagues from Iowa suggested the lack of time as the primary obstacle to an ideal clinical education, and attributed the problem to clinic productivity standards set by administration which often limits the implementation of learning activities (Sass et al, 2011).

Clinical setting' characteristics such as a supportive and teaching culture where learning and teaching are valued and promoted by physiotherapists and hospital staff (Healey, 2008) impact positively on student learning. Institutions or clinical sites that offered diverse experiences and interactions with varied health care providers and allowed time for student reflection are believed to foster and broaden student's professional learning. Employer support and workplace culture appeared to affect Canadian physiotherapists in their perceptions of the benefits and barriers to clinical supervision, and their decisions whether to supervise students or not (Davies, Hanna and Cott, 2011).

## **2.4 Towards a practical framework for clinical internships**

### *Four key themes from the literature*

In consideration of the information sources reviewed as a whole, there appears to be no model of physiotherapy clinical education that is more effective than another (Rapport et al., 2014; Patton, Higgs and Smith, 2013). Recommendation for duration, content or form of delivery of clinical supervision is still lacking (Snowdon, Millard

and Taylor, 2016). The need remains for a clinical education system which reflect rigor and intensity that would bridge the gap between theory and practice, to optimally prepare students as future physiotherapists. The system should expose students to the complexities of the 'real world' clinical setting and be vertically integrated with the 'community of practice' early (Gordon et al., 2000) to develop the necessary knowledge, skills, attitudes and behaviours that befits full membership (Rapport et al., 2014).

Four key themes were distilled from literature to have significant influence on clinical education, supervision and internship; namely **learner-factors**, **teacher-factors**, **teacher-learner relationship** and **learning environment factors**. Learner characteristics and attitudes towards learning (Hall et al., 2016) influence the outcome of their learning experiences. Learning theories (Patton, Higgs and Smith, 2013; Healey, 2008) help us understand how humans learn, and how individuals have preferred learning styles to process new information and the strategies they adopt to optimise learning (Zoghi et al. 2010; Milanese, Gordon and Pellatt, 2013). This shed some light on how teaching methods and strategies may be matched to learning styles to optimize learning of students (Zoghi et al. 2010; Arthurs, 2007) and improve the design and delivery of educational programs and resources. The quality of student supervision by clinical supervisors is a crucial factor for clinical education experience (Wimmers, Schmidt and Splinter, 2006; Silen et al., 2011) as it contributes to effectiveness of student training, and exerts an effect on patient outcomes (Levy et al., 2009). Teacher-related factors such as the qualities and skills of clinical supervisors (Rodger et al., 2008), and teaching pedagogies and strategies (Buccieri, Picko and Olzenak, 2013; Kell and Jones, 2007) have impact on student learning experiences and professional development. A good and comfortable teacher-learner relationship is observed to be essential to promoting a professionally and socially safe environment for the learner to thrive and learn (Healey, 2008). The 'live' environment where clinical supervision and learning by students take place affects the learning experiences of students too. It is fraught with complexities of human relationships and workplace affordances (Billet, 2001), workload pressures (Currens and Bithell, 2000; Recker-Hughes et al., 2014), organizational challenges (Healey, 2008) as well as macro-environmental factors (Recker-Hughes et al., 2014; Rapport et al., 2014).

In summary, as proposed by Roberts (2001), effective clinical supervision is built on the foundation of a 'climate' of trust and rapport, cooperation, collaboration, honesty, open communication and, sound teacher-learner relationships. He suggested that "the learning environment is the linkage between an effective teaching-learning process and learner development" (Roberts, 2001, p.173), and the ideal learning environment or climate concerns the 'socio' and 'psyche' needs of the learners. The philosophical approach to the teaching-learning process is where meaningful experiences are provided under the guidance of the educator to meet individual needs and wants of the learner (Roberts, 2001; Plack, 2008).

### *Going forwards with the preliminary categories*

Going forwards, I will use what has been learnt from the literature to explore further if there were other aspects or factors influencing the effectiveness of clinical internship to realise my research objective. The 4 key themes discussed above; relating to (1) the teacher, (2) the learner, (3) the teacher-learner relationship, and (4) the environment at large including the community of practice, will provide the preliminary categories with which I intend to use to explore in-depth with stakeholders in my hospital context. The categories are premised on the learning environments (immediate and wider circle) that the physiotherapy intern is placed in; the relationships and interactions with significant others in our system; and individual (person) factors. These preliminary categories served as a guide in formulating my research objectives and design which were focussed on acquiring insights on factors that influence clinical education experiences and optimisation of learning (training effectiveness) for interns. The literature has been useful (1) to provide an a priori framework for the evaluation of our current internship program and (2) to serve as a stimulus for starting conversations with internal stakeholders concerning improvements to the program.

## **Chapter 3**

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### **METHODOLOGY**

## Methodology

The research goal was to investigate my organizational issue in a collaborative context with data-driven analysis to understand more deeply the influencing factors for effectiveness of physiotherapy intern training and to build a consensus and coalition for needed changes to address the issue. There appears to be no single theory present in existing literature to fully address clinical training of physiotherapists or healthcare professionals. There is potentially a multiplicity of variables obscured in the complexities of clinical practice cum education system to be explored. Professional training with real patients in real-world settings is dynamic and has its challenges. As the issue is multifactorial involving numerous stakeholder groups, the process of problem diagnosis would need to be systematically conducted to construct the complexities and realities of the learner and teacher 'worlds' and their views. The output of problem diagnosis would be to generate new ideas, discover new knowledge or a workable theory that would be of relevance and benefit to my organization, and which may also inform other researchers. As the current internship program is newly launched, it fitted my goal to engage stakeholders as participants in undertaking inquiry and research together, to identify and analyse issues in the implementation of our training program for novice physiotherapists, to collectively reflect on current training practices and to make progress towards improvements that enhance our education program for interns.

### **3.1 Research Design: Participative inquiry to inform action**

#### **Co-inquiry**

As a manager-leader and change agent, I am interested to lead my physiotherapy colleagues in exploring our issue on internship effectiveness through the process of inquiry and action learning. A participatory inquiry process was adopted to investigate our organizational issue with the view to develop ideas and recommendations for next steps. I am guided, therefore, by the principles and

concepts of action research which provides unique opportunities for the development of varied forms of inquiry and action (Greenwood and Levin, 2007). It gathers perspectives from multiple sources in seeking to understand more deeply and fully the organizational issue. The co-inquiry approach is considered as the engagement with key stakeholders allows us to problematize the issues and work towards practical or actionable solutions relevant to us (Easterby-Smith, Thorpe and Jackson, 2008).

### *Inquiry to inform action*

Deploying this approach for my research with a goal for change has good basis as it is not grounded in formal propositions but draws on the different forms of knowing (Coghlan, 2007) in the community as well as develop practical solutions for the issues at hand. In researching the actions of everyday life, the desired goal was that the inquiry-learning process may motivate and empower my practitioner-colleagues to intervene, improve their own practice and be more effective in the context of their work. In addition, physiotherapy leaders will be engaged to review the research findings, to offer their explanations for them, and to obtain their views on the subject as well. Starting conversations with these leaders is of utmost importance to influence, enthuse and empower them to lead in the next steps in implementing change. The research inquiry process will deploy the 4 influencing themes from my literature review to generate empirical data. Any new concepts, themes, or insights drawn during the research process will help to more fully conceptualize the research problem and inform action for progressive problem solving.

### **3.2 Methodological approach**

The methodological approach for my study sought to generate useful data by adopting different research methods and analytical routines. Researchers have argued that multi data sources provide more perspectives on the phenomenon being investigated (Easterby-Smith, Thorpe and Jackson, 2008). The research design for diagnosing my organizational problem was planned to include a quantitative method



(electronic survey) and qualitative methods (focus groups). The quantitative method provides a snapshot on the pulse of the issue through numerical measurements whilst the qualitative method obtains detailed perspectives through hearing the voices of participants. Qualitative research methods are useful for uncovering meanings people assign to their experiences (Creswell, 2007). Sim and Snell (1996) noted that focus group technique is a neglected method in physiotherapy research and proposed that it can be usefully employed in combination with other research methods such as to expand and enrich quantitative data gathered earlier. In my methodological design, results from the survey and focus groups were both used to evaluate the current clinical internship programme. Nevertheless, as focus groups were run sequential to the survey, the qualitative methods can be understood as offering a rich interpretation of the numerical data generated from the quantitative survey. Qualitative data collected from participants of focus groups are highly reliable for the explanations of their own perceptions (Barbour, 2007). The qualitative method, therefore, allowed understanding of participants' experiences in context and was able to build from views of participants rather than the researcher. By getting the survey questionnaire completed ahead of the focus group discussions, it helped to counteract any conformity bias as group homogeneity tended to encourage polarisation effect (Sim and Snell, 1996, p.193).

### *Position of the Researcher*

Undertaking research within my own organization has its advantages and challenges relating to preunderstanding, role duality and access (Coghlan and Brannick, 2010). Based on my own lived experience in the organization, preunderstanding of the system, people, norms and cultures of my organization was advantageous for me as an insider. I have easy access to stakeholders and a better understanding of the organizational dynamics operating in the context of the study I am undertaking. However, the preunderstanding also presents the need for me to balance between my organizational role and researcher role, and to address potential dilemmas of maintaining distance in order to assess and critique my organization (more specifically, the physiotherapy department under my charge). The conflict of role duality pertains to outer dynamics of my researcher role in carrying out the process

of inquiry consciously and explicitly, and the inner dynamics of challenging my presuppositions, and how I think and feel in weighing the evidence and making judgments of my organization and colleagues.

As I explored in-depth with my participants and co-inquirers, I was fully cognizant of my role as a researcher and the need to be sensitive enough and skilled enough to understand the participants' views; what their viewpoint is and why they held the particular viewpoint. I took into account the potential influence I might have on the research process, and was consciously reflexive to avoid bias throughout the course of collection and representation of data. I was keenly aware to resist making assumptions arising from any 'pre-understanding' of the research topic and setting, and to not impose my own reference frame when asking questions and/or interpreting answers during data collection. Being reflexive required that I was continuously aware and thought about the effects I might have on the process and outcome of the research. I constantly stepped back and reflected about the immediate experience. I prepared reflection notes and these were discussed with my academic supervisor in our monthly meetings. My academic supervisor played a valued role in constantly reminding me to question any assumptions I may hold as I make sense of the data collected and my experience as an insider researcher.

### *The plan for data gathering*

Initializing my inquiry in relation to the 4 themes from my literature review of the influencing forces on clinical learning experiences, a survey questionnaire was introduced first to examine the perception of interns, clinical supervisors and practitioners on factors influencing the effectiveness of our current internship program. Statistical analysis of the survey data as well as comparative data across stakeholder groups provided a quantitative assessment of the issues experienced around physiotherapy internship. By design, Focus Groups were also run to engage participants in exploring the 4 themes and to gain a richer (qualitative) understanding of the issues of physiotherapy internship through the lenses of each stakeholder group. As it was conducted first, the findings from the survey were used as "stimulus

material” for the focus groups. Survey findings specific to the particular Focus Group and inter-group data were shared during the Focus Group sessions to help stimulate discussion and viewpoints.

By framing the research question within a broader methodological framework, the integration of data through closed (survey) and open (focus group) questions supports a more comprehensive and detailed analysis of the problem. The Focus Groups are part of the research strategy for stakeholder engagement. Starting conversations with stakeholder groups not only sought to understand the lived world of interns and clinical supervisors, to evaluate current training practices but also to draw attention to possible steps to improve practice. Following the Focus Group sessions, engagement with senior physiotherapy leaders was planned as next stage of the strategy to build consensus for action. The stages of the methodological approach is summarised as follows:

- Stage 1: Survey all interns, clinical supervisors and physiotherapists
- Stage 2: 4 Focus Groups sessions (with current interns, clinical supervisors, recent interns, and community of physiotherapists)
- Stage 3: Engagement with Senior physiotherapy leaders

### **3.3 Data collection methods**

The subsections below detail the 2 methods deployed for data gathering; electronic survey and Focus Groups, from design, sampling, data collection process to analysis.

#### **3.3.1 Electronic survey**

Surveys are good ways of collecting data about perceptions, opinions and behaviour of people (Easterby-Smith, Thorpe and Jackson, 2008). The web-based or electronic survey is a useful method to administer a questionnaire; it is cheap and fast and participation is convenient in terms of time and place of participation (Lewis, Watson and White, 2009). The questionnaire is located on a web site and potential

respondents are provided access to the web address and to respond to the survey online (Easterby-Smith, Thorpe and Jackson, 2008). It is possible to ensure that the surveys are complete before submission by creating mandatory fields in the online questionnaire so that by 'forced functions' participants have to answer all mandated questions before they can finalise and submit the survey. Responses are stored directly in the online database which can be conveniently downloaded later into analysis programs such as Excel and SPSS for statistical processing. This saves time and cost of data entry and evades potential transcribing errors. The SurveyMonkey tool was used to administer my survey questionnaire for the reasons described above.

### Designing the survey

The survey questionnaire on 'Factors influencing the effectiveness of clinical internship for physiotherapists' which comprised 20 questions (including demographics) was developed based on the key themes from the literature review. In wording the questions for the survey, the five principles of good design were observed: (1) each question should express only one idea, (2) to avoid jargon and colloquialisms, (3) to use simple expressions, (4) avoid the use of negatives and (5) avoid leading questions (Easterby-Smith, Thorpe and Jackson, 2008, p. 227). The scale for measurement of participants' opinion was on an 11-point ordinal scale (0 to 10) with anchor descriptions to measure responses to the survey questions.

The questionnaire was tested with several physiotherapy colleagues during development to ensure the questions were understandable and wordings were not ambiguous. From the feedback given, questions were revised and re-tested, and a final, clearer version of the questionnaire was adopted.

### Sampling

All physiotherapists including current interns and clinical supervisors were eligible to participate in the opinion survey. The survey questionnaire (Appendix 1) was

distributed electronically to all potential participants through the Head of Physiotherapy Department. The email invitation to participate was complete with a cover letter from me (the researcher) and the Participant Information Sheet (see Appendix 2). Survey participation was through a web link to <https://www.surveymonkey.com/s/D55RFJR>. The objectives of the survey were explained clearly so that participants could see the benefits of their contribution and be persuaded to respond to the survey. Definitions and abbreviations for the survey (intern, clinical internship, AHPC supervisor, NYP) were described to ensure clarity. Participants were informed that participation in the study was voluntary and no foreseeable risks were associated with the project. Participants were assured that survey responses were strictly confidential and that data from the research would be anonymised and aggregated.

The total eligible participants were 151 after excluding those who were on overseas study leave, long medical leave or maternity leave. Participants were given 2 weeks to complete and submit the survey. Two reminders were sent out 5 days and 2 days before the deadline to increase the likelihood of response. The survey was extended for another 1 week to further increase the response rate.

### *Data collection and analysis*

Participants were requested personal profile data for demographics, and inputs on their perceptions of the effectiveness of the current internship program according to the 4 thematic categorisations; learner factors, teacher factors, relationship factors and environmental factors, and the overall effectiveness score.

The data collected via the subscribed SurveyMonkey web link was analysed using SPSS statistical tools and expressed quantitatively in numerical measurements. The summary measures such as the mean, median and standard deviation were calculated for each survey question. The numeric data were also compared across the different stakeholder groups; interns, clinical supervisors and the community of practitioners, to obtain a more comprehensive take of multiple worldviews.

### **3.3.2 Focus groups**

Focus groups refer to a small group of individuals who share common characteristics or experiences (Parsons and Greenwood, 2000). Sim and Snell (1996) described a focus group discussion as a group discussion centred on a specific topic and facilitated by the researcher to generate information on collective views, rich understanding and insights of participants' experiences and views. In addition, focus group discussions could clarify or qualify; extend or challenge data collected through other methods (Gill et al., 2008). Calder (1977 cited in Sim and Snell, 1996) suggested that focus groups may be deployed to enrich relatively superficial data from prior quantitative research.

As group members “discuss, explore, describe, explain, share and compare their thoughts, ideas, and perceptions about a pre-identified topic” (Parsons and Greenwood, 2000, p.170), rich experiential data are produced to furnish explanations and enhance our understanding of human social life; attitudes and behaviour (Barbour, 2007). Parsons and Greenwood (2000) suggested that group discussion may be used to validate the findings of quantitative research. Focus groups were used here as part of the armamentarium of methods to gain insights into the research questions to be addressed. Deployed after the quantitative research method, focus groups were shown the results of the survey, and participants' opinions were sought to shed light on the numeric results. By access to individuals' perspectives and lived experiences, issues around internship were better understood so that appropriate and effective interventions may be subsequently developed from these insights. Focus groups also have the potential to compare data from parallel datasets. It was able to illuminate differences of viewpoints among the different groups and among members intra-group.

Morgan (1988 cited in Barbour, 2007, p.32) proposed that focus groups are useful in “investigating what participants think” and “uncovering why participants think as they

do". This unique capacity allows an understanding of how views are formed within a group as individual member's attitudes may modify or shift as viewpoints are questioned or discussed during the dynamic processes of focus groups. The interchange between participants, which may include intra-group differences, provide valuable data and insights into group processes (Barbour, 2007), which could lead to further thoughts and exploration of the issues. I sought to capture these observations of group dynamics during the conduct of focus groups. The qualitative data generated from focus groups capitalised on the interaction that takes place within the group (Sim and Snell, 1996) as well as the descriptive which provide richness to the data. There is high reliability in the data generated from within each group for the perspectives from that group.

Besides data collection, Focus Groups were deployed as a vehicle to start conversations with stakeholders and build consensus about improvements; this is a strategic step in my research approach. As this is the first time Focus Groups was used in my local setting in this manner of inquiry and engagement towards action, my research work is novel and innovative in this regard.

To run a Focus Group successfully from start to finish, there were important steps to be considered; they included the sampling strategy, preparing for Focus Group sessions, and conducting Focus Group discussion, which are detailed below:

### Sampling Strategy

Four focus groups were planned for;

- Current interns
- Clinical supervisors
- (Community of) physiotherapists
- Recent interns

Besides the 2 major stakeholders; current interns and clinical supervisors, the community of physiotherapists were also included for data gathering as they interact professionally on a daily basis with the clinical supervisors as colleagues, and with

interns as their seniors. Their opinions on internship would be based on their ground observations of interns and supervisors and the interactions between them as well as their own personal and professional relationships with both groups in their capacity as senior therapists and colleagues in clinical teams.

A separate and additional group from within the community of practitioners was organised; these were physiotherapists who recently completed (within 12 months preceding this study) the internship program. They were categorised as recent interns to distinguish from current interns undergoing the program. They were interviewed as a separate group as these therapists would be able to provide detailed accounts of their internship experiences due to recency. The operating context of their internship was presumed to be closely similar to current internship program as well. Their opinions would be compared with the current batch of interns for similarities and differences.

The focus groups were homogeneous in composition based on professional roles of participants as a common frame of reference. As group members were of equal or roughly equal status or position, power differential among members was small; group interactions were less inhibited and members were reasonably comfortable and more spontaneous in expressing their views. On the same note, compared to a one-to-one interview where the imbalance of power between interviewer and interviewee is not uncommon, participants in a group setting may actually feel more empowered (Kelman, 1972 cited in Sim and Snell, 1996). As I am neither a clinical supervisor nor a physiotherapist, the issues concerning researcher-participant relationship or power imbalance that might influence the responses to the interviews were minimal.

Gill et al. (2008) noted that group size is important in focus group research; too few numbers may limit discussions while large numbers may be unwieldy and hard to manage or fail to provide sufficient opportunities for all participants to speak. Parsons and Greenwood (2000) suggested that in large groups there is also potential for 'social loafing' where some participants may sit back and not participate.



On the other hand, a group which is too small can also result in a dull discussion with less variety and less contrasting opinions. Gill et al. (2008) suggested that six to eight participants for a focus group are optimal while Parsons and Greenwood (2000) opined four to eight participants as a suitable group size.

The listing of staff names in the 4 groups were obtained from the Head of Physiotherapy Department and sorted in alphanumeric order. The random sequence randomiser (from random.org) was used to pick 8 participants for each group. As there were 9 interns undergoing internship currently, all were recruited for the focus group discussion. Email invitations were sent to those randomly picked to participate in focus groups; categorised as follows:

- Group 1: Interns (current)
- Group 2: AHPC clinical supervisors
- Group 3: Recent interns
- Group 4: Community of physiotherapists

#### *Preparing for Focus Group sessions*

There were practicalities involved when planning and preparing for Focus Group sessions such as arranging and checking out the venues, planning the approach for the group discussion, and preparing participants for the session.

Thought was put into how best to run the Focus Group sessions that would stimulate and sustain discussion. The sessions aimed to collect data from Focus Group participants on their reaction and feedback to the survey results, and also their views on internship; which is my research focus, in more detail.

##### *a) Designing the Focus Group session*

In anticipation of the discussion, the approach was to develop a series of open-ended questions as a semi-structured topic guide to run the focus groups. Each semi-structured topic guide (see appendices 3a, b, c, d) would comprise of key questions and sub-questions to probe the views, experiences and /or motivations of individuals for a deeper understanding of the specifics. The questions formulated

were non-threatening in nature and phrased in a manner that appealed to participants to explain or expand on their perspectives to elicit as much information as possible about the opinion survey as well as the subject on training effectiveness of physiotherapy internship. A prepared outline of questions was necessary to ensure smooth facilitation of the interview process; as highlighted by Greenwood and Parsons (2000), questions and probes do influence the quality of the data obtained from Focus Groups. The researcher can probe for “confirming, disconfirming and missing information” (Plack, 2008, p.9). Although the questions were planned and ordered, the semi-structured topic guide was intended as a flexible guide rather than a strict protocol to be followed. Flexibility and spontaneity in the semi-structured discussion approach allows leeway to diverge in order to pursue an idea or perspective or to ‘narrow’ and elaborate on the pertinent (Gill et al., 2008).

Stimulus materials were incorporated in the series of open-questions to elicit discussions and exploration of specific issues with Focus Group participants. They included previous studies conducted by other researchers that were relevant for our context. They were useful for stimulating discussions on the topics of interest and making comparison with the views of others reported in the literature.

A protocol of about 10 to 12 questions was formulated and ordered in sequence for each focus group. Depending on how the conversations panned out at the session, I had planned to be versatile in moderating the discussion, to think on my feet and to make adjustments to the content and order of questions, to be in tandem with responses and any potentially interesting comments that may emerge (Barbour, 2007). Supplementary or laddering questions were fielded to participants where appropriate to achieve clarity or uncover new information. Useful suggestions and inputs on strategies that promote effectiveness of internship were solicited from participants too.

#### *b) Room and resources*

Suitable meeting rooms were booked for the focus group interviews ahead of time. These venues were selected based on the following:

- Accessible to participants
- Away from noise and distractions (to facilitate discussion and audio recording)
- Comfortable size to seat the group in a circle or semi-circular arrangement
- Computer access and projection screen (for visual presentation of survey results)

Stationery such as flip charts, masking tape, pens, paper and post-it sticker pads were made available for participants' use in case needed.

### *c) Getting Focus Group participants ready*

Participants who accepted the invitation to attend focus groups were informed of the study objectives, and interview times and venues. Survey findings for the specific Focus Group were sent to participants ahead of the Focus Group sessions to provide food for thought and ready discussion when group members meet.

### Conducting Focus Group discussion

At the Focus Group session, the following process was observed:

#### *1. Project Brief and Consent-taking*

Participants were greeted and welcomed. Participants were briefed on the aims and objectives of the research, the expectations from the session and the subsequent use of the analysed research data. Request for audio recording and note taking was sought from the participants. Participants were given assurance on the confidentiality and anonymity of the research process and data collected. The length of the discussion was estimated to last between 1.5 to 2 hours. Creswell (2007) suggested that the disclosure of project purpose and focus group procedures for data collection was important to help build rapport with participants. Participants were then requested to sign the consent form (Appendix 4) if they agreed to participate in the focus group.

## *2. Participant Introductions*

Participants did not require introductions as they were from the same department. However, for the researcher's sake (as I am not a physiotherapist) to be able to address individuals respectfully by name, an improvised name plaque was placed on the table in front of each participant for ease of identification.

## *3. Facilitating focus group discussion*

### *Generating the data*

Participants were encouraged to be candid and reassured that there are no right or wrong answers to the questions asked. This was relevant in a group environment to ensure dissimilar focus and diverse views were aired as well without fear to conform. The objective was to mitigate polarisation effect as a result of social acceptance bias.

Good interviewing skills and techniques were necessary to encourage fruitful discussion, to collect comprehensive and representative data during the interview. It was also important that I guided the discussion without participating so as not to introduce bias (Gill et al., 2008). My endeavour to exercise good facilitation skills throughout the course of the group discussion included actions and behaviours that:

- Facilitate rather than control it
  - Allow participants to speak rather than give answers
  - Encourage all to speak but need to manage those who hog the limelight (or dominate the discussion)
  - Ensure a non-judgemental environment so that participants will participate freely and honestly (and not fear disapproval from individuals or group)
- Be respectful and non-condescending
- Refrain from projecting my own opinions or feelings; stay neutral
  - Encourage positive group dynamics
  - Encourage participants to 'problematize' concepts

During the course of the discussion as data were being generated, skilful listening and picking up on cues from group exchanges were essential to guide in asking questions and accessing participants' meanings and conceptualizations of the issues raised. Attention was paid to any differences between participants' perspectives; clarification was sought to verify unclear responses; and insights were drawn into why people think as they do. In general, there is greater tendency for Focus Groups to veer towards consensus. As a moderator, as much as possible, I steered the discussion away from agreement, to explore possible contentious areas and draw out any discordant voices. Constant comparative method was used to interrogate similarities and differences between individuals within the group.

### *Recording*

Voice recording of the Focus Group discussions was done on my handphone which was easy to use and unobtrusive. The voice recorder on my laptop was used as a backup in the event the recording on the handphone did not work.

To ensure confidentiality and anonymity, participants could be identified as Participant A, Participant B and so forth. However, for the discussion to be natural, participants agreed to address each other by their personal names. They were assured that individuals will not be identified in any documentation or report.

### *Note-taking*

Notes were taken concurrent to audio recording to keep tab of the discussion and to pen down observations of features of the group and the group dynamics during discussions. A predesigned form (see Appendix 5) was created for note-taking; the subheadings on the form also guided me in organising my thoughts and discussion flow of the Focus Group discussion from the beginning to the close. Observations that were recorded in the notes included behavioural expressions such as tone, gestures, body language and emphases that cannot be captured on the voice recorder. An indication of timing was made whenever notes were taken during the progress of the discussion. This helped me to synchronise my notes with the audio

recording later on. Gill et al. (2008) suggested that field notes should be captured during and immediately after the interviews to record observations and thoughts while they were still fresh, as these notes would be useful for recall during the data analysis stage.

### *Closing the discussion*

At the end of the Focus Group session, all participants were thanked for their contributions to the discussion. They were informed that the study results would be shared with all physiotherapists in the Department. The Education leaders in the department would also be engaged to review the key findings and recommendations, and after that take appropriate actions to improve the current internship program. Participants were asked for their feedback on the Focus Group research process as well; what went well and what could be improved. The feedback was sought so that I could make necessary changes, if any, to the process for subsequent Focus Groups. As part of good practice, additional notes and reflections post interview were captured immediately for the record while my thinking was still fresh.

### *4. Focus group activity*

Participants were requested to rank the order of importance of 4 factors; (1) supervisor-related factors, (2) intern-related factors, (3) environment-related factors, and (4) intern-supervisor relationship in influencing the effectiveness of clinical internship of physiotherapists; these listed factors were based on preliminary categorisations distilled from literature.

The ranking exercise was done as an activity. The 4 influencing factors were listed on a flip chart which was taped on the wall. Participants were each given 18 coloured stickers (purchased stationery pack) and informed that each sticker represented a score-point of importance. Participants were invited to paste their stickers on the chart against the 'factor' chosen according to their personal opinions; more stickers

would indicate greater importance. Participants could choose not to put any sticker if a 'factor' is deemed unimportant. Similarly, there was no limit to the number of stickers they could place against any 'factor'.

### Data analysis

Analysing the qualitative data from Focus Groups involved the process of data transcription, coding into categories, memo-ing initial thoughts, clustering of codes into themes, and comparing the data across groups.

#### *a. Data transcribing*

The tape-recorded Focus Group discussions comprising about 2 hours of audio data each were transcribed verbatim after the session as a record of the group discussion among members. Participants were anonymised as Participant 1, Participant 2 and so forth in the documentation. The interaction among participants including verbal and non-verbal cues and expressions were recorded in the transcripts to capture the spirit and mood of the discussion as well.

#### *b. Coding of qualitative data*

The NVivo software package was used to aid the process of data analysis as it was capable of organising huge amount of qualitative data and support varying levels of analytical sophistication. To begin with, 'a-priori' codes based on the main themes from the literature review were set up as the provisional coding frame. The 4 factors; intern-related factor, supervisor-related factor, environmental factor and intern-supervisor relationship, were assigned as coding categories or parent nodes. Sub-factors associated with these factors were created as child nodes. As each of the transcripts was run through, relevant portions of the data; phrases, sentences and paragraphs, were systematically sorted and coded. New 'in-vivo' codes were derived from the analytical coding process; new parent and child nodes were created and incorporated into the provisional coding frame. Data analysis involved moving back and forth between the coding frame and the transcripts. Focus group data are inherently complex as discussions among participants occurred at multiple levels of

co-construction in response to a specific issue or question (Barbour, 2007). The analytical routines sought to identify patterns in the data and formulating explanations for these patterns. I, the researcher continually interrogated the relationship between other codes and coded excerpts as analysis was refined. Care was taken not to take excerpts out of context, paying attention to group dynamics during focus group discussions; to individual voices; and to differences between individuals (Barbour, 2007, p.143). The coding of data was multi-faceted at times with excerpts of transcripts fitting simultaneously into more than one coding category. This difficult process to slot into a neat coding category underpinned the complexities, linkages and sophistication of social constructions. This analytical process led to adding, removing or renaming nodes and categories, generating new ideas, and revision to the preliminary coding frame.

#### *c. Memo-ing*

As I immersed myself in the details of each transcript to get a sense of the whole focus group discussion and viewpoints of participants, my initial thoughts, ideas and new concepts were written down as they occur. These notes were documented as Memos in NVivo for each focus group. They were critical records of my reflections, insights and interpretation of the data. Interpretation involves making sense of the data, and might be based on hunches, insights and intuition (Creswell, 2007). The memos were therefore analytic and self-reflective, comprising my “questions, musings, and speculations about the data and emerging theory” and “personal reactions to participants’ narratives” (Creswell, 2007, p.290). The analytical routines were applied in this whole process of thorough and iterative engagement with the data; in coding and writing. The memo-ing also provided a practical routine for my reflexive examination of my position as an insider researcher; to check on any taken-for-granted assumptions that I may hold or issues associated with power relations.

#### *d. Developing Themes*

After the transcribed Focus Group data have been thoroughly explored and coded, the coding categories or nodes list and the hierarchy of nodes were reviewed. They were reorganised and clustered into broader themes where linkages between



categories and subcategories or relevant patterning were identified. New themes emerged on top of those conceptually-developed earlier on.

*e. Comparison of focus group data*

The NVivo software was useful in enabling the data to be organised to cover the specific themes or codes and be systematically analysed and compared. This was achieved by making queries to the NVivo-powered dataset. A matrix grid was produced to compare data across focus groups based on the developed themes. Barbour (2007, p. 130) suggested that producing the matrix “guards against impressionistic analysis, thus enhancing rigour”. Systematic applications of constant comparison of both inter- and intra- group data helped the data analysis to transcend beyond purely descriptive accounts and enhanced analytical sophistication (Barbour, 2007). The constant comparative method involves “continuously and systematically comparing and contrasting the comments made in separate focus groups and by different individuals within groups. It also refers to using the findings of other studies in order to contextualise one’s own findings through highlighting and seeking to explain similarities and differences” (Barbour, 2007, p.155). Tapping on thematic categorisations and thorough interrogation of the data, valuable insights on similarities and differences inter- and intra- groups were obtained from my qualitative analysis.

### **3.4 Engagement with senior physiotherapy leaders**

After analysis of the empirical data, senior physiotherapy leaders in the department were engaged as part of the research strategy to widen the conversations on the issues and to build coalition on making progress with improvements. A meeting was arranged with the Physiotherapy Head of Department, Education Director/Lead and Deputy Leads for the engagement. Results of the survey and Focus Groups (FGs) findings, and the survey questionnaire for reference, were given to the participants several days ahead of the engagement meeting for their perusal and preparation for the meeting. The agenda for the meeting included my inviting their response to the findings, obtaining their perspectives on internship issues, offering them my

recommendations and ideas, and finally inviting their suggestions and comments on next steps. As these leaders; the Head of department and Education Leads, are influential staff members, they are empowered to act on practical knowledge generated from the data and to make the appropriate decisions for next steps. As described in my research design, the desired goal of co-inquiry is to inform action for progressive problem solving. Garnering the leaders' support and ownership of the issues as the next stage of the research cycle was crucial for progressing towards needed change actions. Chapter 6 provides the narrative of the discussion with these leaders on the empirical work, the proposed improvement strategies and their planned action in response to the recommended changes.

### **3.5 Research Ethics**

Ethics approval was sought and gained from the University of Liverpool to conduct the research. Potential participants invited to take part in the study (electronic survey and focus groups) were advised participation is voluntary. They were provided the Participant's Information Sheet which detailed the process of recruitment, confidentiality, informed consent, storage of data, and dissemination of the findings. Participants were reassured that taking part in the study would in no way adversely affect their work or training. They were also reassured that survey responses and focus groups discussion were confidential and anonymised, and the data stored safely. Consent forms were signed by focus groups' participants prior to commencing the face to face discussions.

The next chapter will report on the diagnosis of issues concerning our current internship program according to the 2 methods deployed; survey and Focus Groups. Statistical and text findings are generated from the analytical routines of the two data sources.

## **Chapter 4**

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### **RESEARCH FINDINGS**

## Research Findings

As an insider research, the inquiry process is about working with and generating a rich understanding of the experiences and perspectives of different actors (or stakeholders) in the internship program. The process involves co-construction of the issues, and identifying the main themes. The issues of current internship were diagnosed through statistical and text analysis from the mix of methods deployed in this study. The literatures were regularly turned to as well for construction of meaning and ongoing learning.

The research to diagnose the issues associated with the current programme was conducted in the following chronological order; survey (quantitative) followed by focus groups with stakeholders (qualitative). Timings of data collection activities are shown below:

<u>Data Collection Activity</u>	<u>Date (Start – End)</u>
Electronic Survey	25 Nov 2014 – 15 Dec 2014
Focus group with interns	20 Jan 2015
Focus group with clinical supervisors	26 Jan 2015
Focus group with recent interns	29 Jan 2015
Focus group with physiotherapy community	3 Feb 2015

The key findings and analysis are described here under 2 broad headings: (1) Quantitative survey results and (2) Qualitative Focus Groups results.

In section 4.1, descriptive statistics from the survey provided a general orientation of the opinions from stakeholder groups on factors influencing the effectiveness of clinical internship based on the 4 preliminary categorisations or major themes distilled from literature, as described in Chapter 2.

In section 4.2, six major themes generated from the Focus Groups data analysis are described. Four of these themes are those derived from the literature review, and two emerged from the inductive analysis of the data. Rich, detailed findings from each of the four Focus Groups are presented here structured according to the 6 thematic categorisations. The key findings are compared across the focus groups to elucidate similarities and differences in viewpoints, and to better understand the lived experiences of key stakeholders; the interns and clinical supervisors, in the clinical education and supervision process. Results of the ranking exercise by Focus Groups' participants on level of importance of the 4 literature themes are presented too.

#### **4.1 Quantitative Survey Results**

The survey data collected was analysed using SPSS, and the results expressed as descriptive statistics below.

##### ***Demographics***

One hundred and fifty one (151) surveys were sent out to all physiotherapists that included nine (9) interns and thirty (30) clinical supervisors. A total of 107 survey returns were received, giving an overall response rate of 70.9%. According to groups, the response rate from interns was 77.8 % (7 out of 9), 36.7% (11 out of 30) from clinical supervisors and 79.5% (89 out of 112) from the community of physiotherapists. Male respondents totalled 25 (23.4%) and females 82 (76.6%) which is representative of the physiotherapist gender workforce. Of the supervisor-respondents, all had at least 5 years work experience and nearly two thirds (63.6%) with 10 or more years' experience. 61.8% of respondents from the community of physiotherapists had less than 5 years' work experience. Table 1 summarised the demographics of the surveyed population.

Table 1: Survey demographics

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Total Respondents: 107  
Response rate: 70.9% (107 out of total 151)

Male: 25 (23.4%)  
Female: 82 (76.6%)

Interns: 7 out of 9 (77.8%)  
Clinical supervisors: 11 out of 30 (36.7%)  
Physiotherapists: 89 out of 112 (79.5%)

Work experience of participating supervisors:

1 to less than 5 years 0 (0%)  
5 to less than 10 years 4 (36.4%)  
10 years and above 7 (63.6%)

Work experience of participating physiotherapists, excluding current interns:

Less than 1 year 4 (4.5%)  
1 to less than 5 years 51 (57.3%)  
5 to less than 10 years 19 (21.3%)  
10 years and above 15 (16.9%)

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### ***Statistical Analysis***

The survey data was analysed based on participants' categories: (1) current interns (2) clinical supervisors and the (3) community of physiotherapists, and their responses to individual survey questions. The statistical findings showing Mean, Standard deviation, Maximum and Minimum scores for each question, were tabulated as shown in Table 2.

Overall, scores from clinical supervisors were lower or worst of for all questions compared to the other 2 groups of participants. The mean scores for all questions were unexceptional, most hovering around the range 5 to 7.

Supervisors rated below midpoint score of '5' in the following areas; interns' attitudes towards learning; interns' knowledge base; interns' learning method / style and the quality of environment in supporting supervisors' teaching. The ratings by

participants in these areas were noted to be wide ranging from as low as 0 (minimum score) to a high of 8 (maximum score).

Interns and physiotherapists rated the supervisors good (mean score: 7) in teaching skills and abilities; the mean score of 7 is among the highest for any of the survey questions.

Interns rated workload pressure significantly higher than the supervisors and physiotherapists (mean score of 7.57 is highest for any question).

In assessing the quality of relationship between interns and supervisors, both groups self-rated and the results matched closely (Interns:  $6.57 \pm 1.62$ ; Supervisors:  $6.45 \pm 1.37$ ).

The overall evaluation on effectiveness of current internship program in preparing interns for entry to professional practice turned out mediocre results (Interns:  $6.14 \pm 1.07$ ; Supervisors:  $5.55 \pm 1.92$ ; Physiotherapists:  $6.45 \pm 1.37$ ).

Table 2: Statistical results for individual survey questions

**Effectiveness of current internship program**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	6.14	1.07	5	7
Clinical Supervisors	5.55	1.92	3	8
Physiotherapists	6.45	1.37	2	10

**Quality of teaching methods (clinical supervision)**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	6.29	1.25	5	8
Clinical Supervisors	6.09	1.70	3	8
Physiotherapists	6.44	1.43	2	10

**Quality of environment in supporting supervisors' teaching**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	6.86	1.68	5	9
Clinical Supervisors	4.82	2.18	0	8
Physiotherapists	5.69	1.94	1	10

**Supervisors' attitude towards teaching**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	6.57	1.51	5	9
Clinical Supervisors	6.36	1.03	5	8
Physiotherapists	6.78	1.40	2	10



Table 2: Statistical results for individual survey questions (continued)

**Supervisors' skills and abilities in teaching**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	7.00	1.53	5	9
Clinical Supervisors	6.45	0.93	5	8
Physiotherapists	7.01	1.26	3	10

**Interns' learning methods**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	6.29	1.38	5	8
Clinical Supervisors	4.91	2.02	0	7
Physiotherapists	6.06	1.42	3	10

**Quality of environment in supporting interns' learning**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	6.43	1.99	4	9
Clinical Supervisors	5.45	1.86	3	8
Physiotherapists	6.17	1.72	1	10

**Interns' attitude towards learning**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	6.86	1.57	5	9
Clinical Supervisors	4.09	2.30	0	7
Physiotherapists	5.70	1.66	1	9

Table 2: Statistical results for individual survey questions (continued)

**Interns' knowledge (theory) base**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	6.43	1.13	5	8
Clinical Supervisors	4.73	2.01	2	8
Physiotherapists	5.54	1.42	1	8

**Workload pressure**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	7.57	1.62	5	10
Clinical Supervisors	6.82	1.66	4	9
Physiotherapists	6.26	1.92	0	10

**Staffing level of supervisors**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	6.14	1.57	4	8
Clinical Supervisors	5.27	2.41	0	9
Physiotherapists	5.34	1.89	0	10

**Organizational and administrative support to supervisors and interns**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	5.71	1.60	3	8
Clinical Supervisors	5.45	2.51	0	8
Physiotherapists	5.49	2.16	0	10

Table 2: Statistical results for individual survey questions (continued)

**Information sharing and help/guidance from experienced staff (collegiality)**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	6.71	1.70	5	9
Clinical Supervisors	5.91	1.76	2	8
Physiotherapists	6.13	1.31	3	10

**Mentorship and role modelling**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	6.71	1.50	5	9
Clinical Supervisors	5.55	1.81	2	8
Physiotherapists	6.16	1.41	3	10

**Quality of intern-supervisor relationship (self-evaluation)**

<i>Group</i>	<i>Mean</i>	<i>Standard Deviation</i>	<i>Minimum Score</i>	<i>Maximum Score</i>
Interns	6.57	1.62	5	9
Clinical Supervisors	6.45	1.37	4	9

The statistical results are also presented as Mean and Standard Deviation charts in Appendix 6.

## **4.2 Qualitative Focus Groups Results**

Key to the research inquiry process was my engagement with participants in focus groups. Based on the 4 categorisations or themes initially distilled from literature, the survey questions were developed to inquire stakeholders on their perceptions of the effectiveness of our current physiotherapy internship program. The statistical results from this quantitative survey (Section 4.1 above) were used as vehicles for discussion in these engagements with stakeholder groups. A large amount of focus

group data was generated and contextual findings and meanings were illustrated using representative quotes from Focus Group participants.

### *Coding and analysis of qualitative data*

The transcripts or raw data from Focus Groups was imported into NVivo software and systematically analysed. This process of coding involves taking words of varying sizes, phrases, sentences and whole paragraphs and assigning labels (i.e. codes) to allocate meaning to the descriptive or inferential information in the wide context of clinical education and internship. This coding and analysis process involves the constant making of comparisons and the asking of questions in order to make sense of the data and developing the underlying themes to explain the phenomena. Aptly described by Basit (2003), the process of coding the data is an organising tool as well as an intense conversation between researcher and the data in descriptive reporting and theory building. These codes are called “nodes” in the NVivo software. Nodes were created, named, renamed or moved around during the text analytic process to best describe thematic relationships among these elements. An extract of the text data could be coded more times as required if more than one node was applicable.

To begin with the coding process, I used the 4 preliminary categorisations or themes from literature as my provisional ‘start list’ of codes. The 4 main themes; intern (learner) factors, supervisor (teacher) factors, intern-supervisor relationship, and environmental factors were assigned “parent” nodes. Units of data that relate to these main themes (or parent nodes) were assigned “child” nodes and “grandchild” nodes based on their associated properties and relationships. This mode of coding is deductive based on pre-determined categorisations.

Not all the coded data could fit into the 4 literature themes. These ‘free’ assigned “child” codes are then sorted, assembled and clustered into new “parent” nodes or themes. This mode of coding is inductive as it is generated from the empirical data

through logical reasoning, thinking and theorizing of the phenomenon experienced. Two new additional themes emerged from this inductive analytical process.

After all qualitative data has been analysed and categorised into themes and sub-themes, the outcome could be visualised as the node tree that depict the hierarchy of nodes; 'parent', 'child' and 'grandchild' nodes. This is displayed in Table 3.

Table 3: Major themes and their sub-themes

	Theme	Sub-themes	
	<i>'Parent' node</i>	<i>'Child' Node</i>	<i>'Grandchild' node</i>
1	Intern (learner) factors	<ul style="list-style-type: none"> <li>○ Learner's knowledge base</li> </ul>	<ul style="list-style-type: none"> <li>○ Need to refresh knowledge</li> <li>○ Knowledge and skills gaps</li> </ul>
		<ul style="list-style-type: none"> <li>○ Learner's style of learning and learning methods</li> </ul>	<ul style="list-style-type: none"> <li>○ 'Show and reason'</li> <li>○ 'Demonstrate back and receive feedback</li> <li>○ Need to communicate learning preferences</li> <li>○ Need for reflection</li> </ul>
		<ul style="list-style-type: none"> <li>○ Learner characteristics and attitudes</li> </ul>	<ul style="list-style-type: none"> <li>○ To be more self-directing</li> <li>○ To be more proactive</li> <li>○ 'Learn as much as I can'</li> <li>○ Positive attitudes</li> <li>○ Negative attitudes</li> <li>○ Impact of heavy workload</li> </ul>
		<ul style="list-style-type: none"> <li>○ (Workplace) Learning environment</li> </ul>	<ul style="list-style-type: none"> <li>○ Influences of cultural and social norms</li> <li>○ Support of colleagues</li> </ul>

Table 3: Major themes and their sub-themes (continued)

	Theme	Sub-themes	
	<i>'Parent' node</i>	<i>'Child' Node</i>	<i>'Grandchild' node</i>
2	Supervisor (teacher) related factors	<ul style="list-style-type: none"> <li>○ Teacher characteristics and attitudes towards teaching</li> </ul>	<ul style="list-style-type: none"> <li>○ Great clinicians not necessary great teachers</li> <li>○ No time</li> <li>○ Willingness to teach</li> <li>○ Accessibility (by learner)</li> <li>○ Attention to learner's training progress</li> <li>○ Positive attitudes</li> <li>○ Negative attitudes</li> </ul>
		<ul style="list-style-type: none"> <li>○ Teacher's style of teaching and teaching methods</li> </ul>	<ul style="list-style-type: none"> <li>○ Negative feedback in presence of patients</li> <li>○ Preferred coaching approach</li> </ul>
		<ul style="list-style-type: none"> <li>○ <i>Teacher skills and abilities</i></li> </ul>	<ul style="list-style-type: none"> <li>○ <i>Years of experience</i></li> <li>○ <i>Training in educational pedagogies</i></li> <li>○ <i>Educator-mentor</i></li> </ul>
		<ul style="list-style-type: none"> <li>○ <i>Staffing level of supervisors</i></li> </ul>	<ul style="list-style-type: none"> <li>○ <i>Supervisor-trainees ratio</i></li> <li>○ <i>Availability matters more than ratios</i></li> <li>○ <i>Seniors provide relief</i></li> </ul>
3	Intern-supervisor relationship	<ul style="list-style-type: none"> <li>○ Positive / Negative relationship</li> </ul>	<ul style="list-style-type: none"> <li>○ Trust and rapport</li> <li>○ Fear of judgment and penalty</li> <li>○ Good, open communication</li> </ul>

Table 3: Major themes and their sub-themes (continued)

	Theme	Sub-themes	
	<i>'Parent' node</i>	<i>'Child' Node</i>	<i>'Grandchild' node</i>
4	Environment factors	<ul style="list-style-type: none"> <li>○ Workplace culture</li> </ul>	<ul style="list-style-type: none"> <li>○ Collegiality</li> <li>○ Culture of continuous learning</li> <li>○ Involve larger community</li> </ul>
		<ul style="list-style-type: none"> <li>○ Organizational support</li> </ul>	<ul style="list-style-type: none"> <li>○ Clinical team support</li> </ul>
		<ul style="list-style-type: none"> <li>○ Workload-Manpower census</li> </ul>	<ul style="list-style-type: none"> <li>○ Workload performance target</li> <li>○ Work pressure</li> <li>○ Manpower leave coverage</li> </ul>
		<ul style="list-style-type: none"> <li>○ Role modelling</li> </ul>	<ul style="list-style-type: none"> <li>○ 'Model' the style</li> <li>○ Professional values, attitudes and behaviours</li> </ul>
5	Coaching activity	<ul style="list-style-type: none"> <li>○ Coach availability</li> </ul>	<ul style="list-style-type: none"> <li>○ Set aside time</li> <li>○ Coach accessibility &amp; proximity</li> <li>○ Posting location</li> </ul>
		<ul style="list-style-type: none"> <li>○ Client (patient) factors</li> </ul>	<ul style="list-style-type: none"> <li>○ Patient accessibility</li> <li>○ Patient's health condition</li> </ul>
		<ul style="list-style-type: none"> <li>○ Coaching and learning styles / methods</li> </ul>	<ul style="list-style-type: none"> <li>○ Clinical reasoning</li> <li>○ Learning preferences / approach</li> <li>○ Mismatch of teaching and learning styles</li> </ul>
		<ul style="list-style-type: none"> <li>○ Coaching in the presence of clients</li> </ul>	<ul style="list-style-type: none"> <li>○ Stressful experience</li> <li>○ Fear of making mistakes</li> <li>○ Fear of negative feedback</li> <li>○ 'Putting on a front'</li> </ul>
		<ul style="list-style-type: none"> <li>○ Protected time for learning and coaching</li> </ul>	

Table 3: Major themes and their sub-themes (continued)

	Theme	Sub-themes	
	<i>'Parent' node</i>	<i>'Child' Node</i>	<i>'Grandchild' node</i>
6	Internship program	○ Mission and purpose	
		○ Training curriculum	<ul style="list-style-type: none"> <li>○ Standardised program</li> <li>○ Inpatient and outpatient postings</li> <li>○ Training in core disciplines</li> <li>○ Orientation program</li> <li>○ More training opportunities</li> </ul>
		○ Training requirements and targets	<ul style="list-style-type: none"> <li>○ Clinical reasoning</li> <li>○ Information overload</li> <li>○ High caseload</li> <li>○ Cumbersome documentation</li> </ul>
		○ Training sites and the work realities	
		○ Resources	○ 'Protected time'

#### **4.2.1 Major themes**

Six major themes were identified; 4 from the preliminary categorisations and 2 new ones that emerged from the qualitative data analysis:

1. Intern (learner) factors
2. Supervisor (teacher) factors
3. Intern-supervisor relationship
4. Environmental factors
5. Coaching activity *[new]*
6. Internship program *[new]*



#### **4.2.2 Key findings of Focus Groups according to themes**

The key findings for the 4 Focus Groups; current interns, AHPC supervisors, recent interns and the community of physiotherapists, have been organised for presentation here based on the 6 major themes identified from the analysis. Each theme will be discussed in detail with subheadings corresponding to the labels of “child” nodes in the thematic analysis. Indicative quotations to reflect rich contextual detail are provided in Tables 3a to 3f to enrich the discussion of the findings.

For clarity purposes, the glossary of terms commonly used in my local context and their meanings are described here:

- ‘Training’ (*noun*) refers to education of or instruction to a person who is being trained. It is used typically in general terms.
- ‘Mentor’ refers to a wise and trusted senior colleague who provides advice, general guidance, counsel and support to a junior colleague for his/her development.
- ‘Coach’ (*noun*) has been used interchangeably with clinical supervisor, clinical instructor and mentor

#### **Theme 1: Intern (learner) factors**

Factors relating to the learner that impact the intern’s learning and developmental process during internship include the learner’s knowledge base, learning styles and preferences, attitudes towards learning, and the learning environment or setting the learner is placed in.

##### *i.      Learner’s knowledge base*

All groups; current and recent interns, supervisors and physiotherapists, felt that interns’ knowledge base was good enough for managing common cases but not specialized ones (example spinal cord injuries, intensive care). They agreed that an

orientation program at each clinical rotation would be very beneficial for the interns to refresh their undergraduate knowledge on the specific disease conditions and therapies.

Recent interns and the physiotherapists further noted that knowledge and skills gaps of some interns might need to be addressed, particularly those who were never offered placement exposure in a specific clinical discipline before during student days. This is an important observation as interns needed to be better prepared for their clinical practice treating real patients. A change recommendation would be appropriate, in view of these inputs, on grounds of patient safety and patient outcomes.

ii. *Learner's style of learning and learning methods*

Most interns expressed their preference for hands-on coaching via 'show and tell' by supervisor, followed by intern demonstrating the techniques and receiving immediate feedback. The context of a patient being there is inevitable. But, by having the supervisor demonstrate and explain the techniques first, perhaps interns feel more assured and less nervous about choosing and applying the wrong techniques on patients. Interns expressed that understanding the theory, the clinical reasoning, discussing the therapeutic interventions in the bigger or holistic context of the patient's health condition would be what they really want from the coaching.

The physiotherapists thought that interns should be proactive about discussing their preferred learning styles/methods with their supervisors so that the coaching approach was tailored to their needs to optimise training. They opined that the one important goal of the clinical supervisor is to facilitate and support the intern's learning and transition to independent practice. In addition, reflection by the intern after a coaching activity was proposed as the ideal method for effective learning.

### *iii. Learner characteristics and attitudes*

Physiotherapy graduates undergo a major role transformation when they transit from students to interns (or first year practitioner). The community of physiotherapists felt that the intern's attitude towards learning as a novice practitioner needed to be more self-directing as they assume increasing responsibility and autonomy in their new role. Current interns self-assessed themselves and thought that they could be more hardworking, more proactive about learning and more open to critique. The clinical supervisors concurred that interns needed to take responsibility for their own training, to show interest and be proactive in seeking information themselves and in asking questions. One attitudinal impediment observed among some interns was selective learning; they put in great efforts only in clinical disciplines they are interested in.

Concerning their perspectives towards internship training, several interns expressed that they regarded it as a good time to learn as much and ask as many questions as possible, and to get advice from experienced practitioners on how to do clinically better in treating patients. One intern described internship as a 'golden period', wherein team members take good care of the novices as they are still under supervision.

The physiotherapists suggested that factors such as heavy workload and judgmental supervisors who stifle inquisition (asking questions) also affected interns' attitudes towards learning. Recent and current interns shared similar sentiments regarding the heavy workload and intensive training (particularly in the initial months), which exhausted them and affected their learning interest progressively. They would do the minimum to meet registration requirements and would only put in the extra effort if a particular rotation is in a clinical specialisation of their interest. This "lack of taking initiative to learn" attitude probably explained for the observation by some

supervisors and physiotherapists that interns were not motivated and did not prepare well for their clinical postings.

Supervisors observed varied attitudes among interns; some were self-motivated and others passive, not proactive about their learning. A point was offered by a participant that perhaps interns and supervisors differ in their perceptions and expectations of training or learning. A case in point was interns 'asking questions'; it could be positively perceived as inquisitive or negatively perceived as deficiency by supervisors. Current interns perceived that their clinical supervisors' expectations of them were a tad too high, perhaps even inappropriate, if they benchmarked interns against themselves.

The observations and opinions by the community of physiotherapists were also varied; some observed interns to be lacking in initiative and wanted to be spoon-fed. Others thought there were those who were proactive, implied from their participation in the multi-disciplinary learning rounds which were not part of the training requirements. Some physiotherapists perceived that interns dislike clinical supervision perhaps because they felt that they have graduated and should be given the autonomy to practise independently.

#### *iv. Workplace learning environment*

Workplaces are unique, complex contexts, influenced by webs of power and acceptance into the community of practice. In general, the physiotherapists felt that the hospital is conducive for learning; there are ward rounds, multidisciplinary clinical meetings and journal clubs which healthcare professionals could just join without fuss. Workplace engagement and interactions with others are salient to intern's learning and development too. The cultural practices, social norms and workplace affiliations may affect the intern in their election to engage in particular ways. For example, a welcoming and nurturing workplace environment that supports the processes of learning encourages individuals to participate purposefully. Where the

professional attitudes of practitioners were open, engaging and learning from one another, interns felt more comfortable and safe to discuss cases and ask questions; the example given was the Rehab unit.

The environmental conditions in inpatient and outpatient physiotherapy settings are unique and different. In the outpatient physiotherapy practice area, some patients were treated in open areas and some in enclosed areas or cubicles. (This has to do with the clinical discipline and the types of equipment needed.) The open environment allowed listening in to seniors' conversations with patients which is useful for learning. It also means that other physiotherapists could listen in and watch the intern manage the patient during coaching sessions. Some interns were fine with this environment while others felt uncomfortable and stressed.

The inpatient ward environment was deemed more complex and dynamic with many care providers; nurses, doctors and other healthcare professionals, from units outside the physiotherapy department to interact with. Human relationships and interactions among and with these colleagues had bearing on the level of assistance and support given to interns during their training; example, the accessibility to patient or patient's casenotes. The challenges faced by some interns in a busy and unfriendly ward setting can be unsettling and frustrating as they coped with daily work and their learning activities.

The table below (Table 3a) provides some indicative quotations of the comments, opinions and ideas of Focus Group participants related to the theme on Intern (Learner) Factors that influence clinical internship and its optimisation. The contextual details which are in the participants' own words serve to enrich my explanations and discussion of the research findings.

Table 3a: Indicative quotations on Intern (Learner) Factors by sub-themes

Sub-theme ('Child' nodes)	Indicative Quotations
Learner's knowledge base	<p><i>"It's been like 2 and half years ago since I last touched a neuro patient. ... I felt very inadequate. When I came back into the rotation, I felt lost; really lost. ... I need to dig up my neuro anatomy, neuro things ... which is massive; a lot of things to study. So, I was lost for a while." (RI)</i></p> <p><i>"I find myself having a gap in certain rotations. Because maybe my (lack of) exposure to that. Example, I've never been to ... Orthopaedics. I've never been (there) in my student days. But some people, they probably went once or twice. So when I see a certain group of patients that is Orthopaedics, I feel like I've no idea. I've never seen any post-op cases as a student until now." (RI)</i></p>
Learner's style of learning and learning methods	<p><i>"You must show me what is it about. E.g. suctioning; ...I do it, then my coach correct my mistake on the spot." (I)</i></p> <p><i>"... I think it will be useful if the coach knows how the person... [the intern] learn? For example, I know that I am a visual learner... so, I would feedback to my coach that I learn through more visual... whereas some other person will learn through more hands-on...so, having that discussion beforehand so that the coach will know how the coachee learn... then the coach will tune the session to how the coachee learns...will really help.." (P)</i></p>

Table 3a: Indicative quotations on Intern (Learner) Factors by sub-themes (continued)

Sub-theme ('Child' nodes)	Indicative Quotations
Learner characteristics and attitudes	<p><i>"... they just graduated... they are no longer students, so their attitude towards learning should be a little bit different compared to what they were previously... they have their own responsibility, they are working now... so I think probably the supervisors think that they should be more independent and no longer asking every single thing..." (P)</i></p> <p><i>"Initially if you started out in a new discipline you'll be very enthusiastic. You want to learn everything as much as possible but gradually over the months, you get tired, you get fatigued. And gradually learning becomes a chore, because it takes up your own time. And then just slowly get more passive. Just find it more like a chore. The passion just dies down." (RI)</i></p>
Workplace learning environment	<p><i>"I mean it depends on human interaction, right? Sometimes I don't like you... that kind of thing. Then, for example, they ask for help and the nurses just ignore them... then it might affect their daily so-called learning and their daily work as well. ...because they need to interact with different... a lot of people... the nurses, Allied Health Professionals, the doctors...so, if somehow they don't start well... someone don't like you... then probably you'll have a difficult period... during that two months in that ward... until you probably get out of there." (P)</i></p>

Legend: I = Intern, CS = Clinical Supervisor, RI = Recent Intern, P = Physiotherapist

## **Theme 2: Supervisor (teacher) factors**

Supervisors did not focus much on this area; however, there appeared to be a little dissatisfaction with interns among them as they lamented and wondered if interns knew the efforts they had expended into training them. They acknowledged that supervisors themselves might differ in views about teaching and about their interns' learning attitudes because perceptions were subjective. For example, some supervisors might think that if the interns keep going to them that they are in need of assurance. Yet, if they did not do so, some supervisors might feel that they are overconfident.

Notwithstanding the inherent differences intra-group, the views of the other stakeholder groups were compared and contrasted in the analytical process. The key aspects relating to the teacher (or clinical supervisor) that influence training effectiveness in clinical internship include teacher characteristics and attitudes towards teaching, teacher skills and abilities, teaching styles and methods, and staffing levels of clinical supervisors.

### *i. Teacher characteristics and attitudes towards teaching*

Current and recent interns observed that some clinical supervisors are great clinicians; very knowledgeable in their fields of practice, but not great educators. There was an opinion that only clinical supervisors who are talented or passionate about teaching be assigned the task rather than purely based on seniority. Some supervisors were willing to teach but did not have the capacity or time to do so because of other administrative responsibilities, high case load and time constraints. A couple of intern-participants expressed difficulties to realize their coaching sessions and fulfil compulsory requirements for supervision hours because of the non-availability of their coaches.



The supervisor-participants suggested that an important point about supervisor's attitude towards teaching was the willingness to teach even if one was not passionate about it. Recent interns opined most of their supervisors were willing to and readily impart their knowledge. The physiotherapists thought that the clinical supervisors were generally keen to teach as some gave off personal time to coach interns. In fact, some physiotherapists wondered if certain supervisors were overzealous with information download and inadvertently applied too much pressure on interns.

Based on the accounts of current interns, the characteristics of current supervisors were a mix of types; some supervisors were patient, caring, supportive, willing and enthusiastic to teach whilst some others were official-like and less caring, not keen to teach, or displayed judgmental attitude. An intern opined that coaching sessions were not effective when supervisors' attitudes towards them were intimidating, judgmental and uncaring; failing to view interns as novices in need of support and encouragement from their teachers. The positive experiences by interns described supervisors who showed respect towards them, treating them like a friend or normal colleague rather than "I am more superior to you" attitude.

Recent interns described factors that would support the interns learning journey to include supervisors' commitment to teach, their accessibility and approachability; a ready channel interns can turn to with ease to meet and to talk with. Paying active attention to intern's training progress was deemed very important too. By appreciating the developmental need of the intern, supervisors can better pitch their coaching at novice level and monitor the learning progress made by intern. Numerous recent interns expressed that at times the teaching by clinical supervisors was conducted way too high at specialist level and they had difficulty trying to understand the subject. The community of physiotherapists suggested that supervisors (as teachers) could be more inspiring and encouraging to boost the morale of interns (learners) and foster their attitude towards learning and internship training.

ii. Teacher's style of teaching and teaching methods

Presently, the main method of supervision was to observe interns apply physiotherapy techniques on real patients. Current and recent interns expressed high stress under this close observation. Recent interns emphasized the importance of giving due respect to patient and to the intern when supervisors provide clinical supervision in the presence of patients. The approach for the interactions among the 3 parties; patient, intern and supervisor, must be done sensitively and professionally without undermining the intern's abilities. Recent and current interns indicated they were distressed and demoralised when supervisors gave negative feedback in the presence of their patients. Recent interns highlighted that comments levelled at them affected patients' confidence in the novice practitioner's capability as well the individual's self-confidence.

The physiotherapists pointed out that no single teaching method will fit all as interns have different learning approaches. It was suggested bite-size teaching be preferred over 'A to Z information overload', and case discussion and peer learning be promoted. Most current and recent interns expressed their preferred coaching approach as follows: 'coach show, intern demonstrate back, coach give feedback'. The supervisor-participants were reticent on this subject of teaching styles and methods. One supervisor was candid about the need for supervisors to assess their own teaching methods and adapt accordingly to meet interns' learning needs. A few others proposed that training in educational pedagogies and mentorship would support their role development as educators.

iii. Teacher skills and abilities

Supervisors expressed that the more experienced the therapist, the more they could impart. They noted with some concern that teaching and coaching had been increasingly assigned to less experienced therapists with the recent influx of interns. The physiotherapists made the same observation on the recent trend of new, less

experienced therapists being added to the pool of educators. Some physiotherapists commented that they were naturally not as good yet compared to the very senior ones.

There was concurrence from all groups that a good clinician did not infer a good educator, the teaching skills might not have matched the supervisor's excellent clinical skills. The supervisor' and physiotherapist' focus groups noted that almost all clinical supervisors did not receive formal training in teaching pedagogies and were left to use their own devices and experiences to teach and coach interns and juniors. It was suggested by physiotherapist-participants that all clinical supervisors should be equipped with educator skills, such as teaching bedside skills and how to give feedback, in order to teach well. They opined that clinical supervisors needed to undergo training and development as well by going through the process of skills training, practice, assessment, mentoring and experience to be effective educators. Clinical supervisors who very recently had the opportunity to attend courses on clinical teaching indicated that they felt more confident now in teaching and guiding the interns.

An educator-mentor was proposed by the supervisors; someone more experienced in education skills that they could seek advice from, get feedback, and bounce ideas with. The physiotherapists suggested that senior educators should supervise and mentor new educators.

#### *iv. Staffing level of supervisors*

There are currently 2 categories of supervisors; one comprising full-time educators without clinical workload and the other clinicians with hybrid of responsibilities. The ratio of supervisor to trainees differed in different sections and different clinical teams. The physiotherapist-participants opined that the number of interns a supervisor handles have impact on the quality of their training. They felt that teaching

effectiveness might be compromised when supervisors have to divide attention among multiple interns.

Recent interns expressed that certain supervisors had too many interns to supervise and this had adversely affected their availability to teach / coach interns. An example given was a certain supervisor who was assigned 20 interns. In their opinion, the ideal supervisor: intern ratio ranges between 1:1 to 1:3; progressing from commencement to end of internship as the intern gains increasing confidence as a new practitioner. The majority of supervisors put the ideal ratio down at 1:2. The physiotherapists thought that 1:1 is ideal but an impractical option, hence proposed 1:2 not exceeding 1:3.

Current interns felt that supervisor availability to coach / teach mattered more with regards to receiving training than the number of interns the supervisor was assigned to coach (i.e. supervisor: intern ratios). Supervisors felt that clinical teams comprising many senior therapists were a great help as they provided relief for supervisors in the coaching of interns as well.

Table 3b below displays some indicative quotations on Supervisor (teacher) factors by sub-themes that affect effectiveness of clinical internship.

Table 3b: Indicative quotations on Supervisor (teacher) Factors by sub-themes

Sub- theme ('Child' nodes)	Indicative Quotations
Teacher characteristics and attitudes towards teaching	<p><i>"I think maybe supervision should only be given to coaches who are really willing and want to coach rather than because it is just a responsibility because you are a senior. Some people are inclined to be educators and some people are more inclined to be clinicians. So, I feel we should tap on their talents in that sense rather than across the board, just because you are a senior." (I)</i></p> <p><i>"I think mine (my supervisors) all were supportive. They are very forthcoming. They all really share what they have learnt. And then they really impart knowledge. So I thought that was really very good." (RI)</i></p>
Teacher's style of teaching and teaching methods	<p><i>"...we have not gone through any clinical supervision kind of course; it's really based on our own clinical experience and... how we have been coached, we kind of absorb a bit and then modify a bit. We might have very good quality but still it is actually based on.... we have to modify and tune down to the level of the supervisee." (CS)</i></p> <p><i>"They're good in their knowledge, but I think... sometimes there is a mismatch in the way they teach us and ... how we learn" (RI)</i></p>

Table 3b: Indicative quotations on Supervisor (teacher) Factors by sub-themes (continued)

Sub- theme ('Child' nodes)	Indicative Quotations
Teacher skills and abilities	<p><i>"I agree with Participant YY that with the knowledge part we definitely have it; but, maybe the skills on how to guide the student. So, for example . . . like certain students learn easier with different methods . . . we are not exposed to those pedagogies. Some of us might not be exposed to the pedagogy courses on how some of the strategies can help them to learn. . . . or even identifying what's the best way to guide someone." (CS)</i></p> <p><i>"...be updated about teaching techniques, how to give good feedback, how to teach clinical bedside skills... things like that...and gain new ideas for teaching and motivating the interns." (P)</i></p>
Staffing level of supervisors	<p><i>"...the first year for the intern ... I will prefer a 1:1, maximum 1:2 kind of supervision. Because I am new, I have totally no idea. I need someone to be really close by, always available to guide me, coach me and teach me... at least for the first month or two months. Then after that once I'm more confident of doing things, then I think ... the ratio can be brought up higher to 1:3." (RI)</i></p> <p><i>"The problem is not the 1 to how many, but more of the time they have available to coach." (I)</i></p>

Legend: I = Intern, CS = Clinical Supervisor, RI = Recent Intern, P = Physiotherapist

### **Theme 3: Intern-supervisor relationship**

Interns have more than one clinical supervisor throughout the internship as they are posted to different clinical disciplines (medical, surgical) and teams (stroke, geriatrics, spine, musculoskeletal, etc.) Intern-supervisor relationship varies with different individual supervisors. Negative relationships described by current interns include feeling “very scared”, “supervisor don't have to be goddess”, “I will not be too personal, it will be work based”, “to my supervisor, I may not be so truthful or upfront”, “you know she is the boss”, “I still keep my distance”. These comments suggested the superior, intimidating stance of the supervisors described. Some interns expressed that the comfort level with their supervisors improved with time. This is a good point as good, comfortable relationships built on sincerity and understanding can enhance motivation and learning.

Descriptions of positive relationships by current interns include “ally at work”, “not hierarchical”, “I can open up with her”, “becoming more like a friend, there is no boundaries or a line”. It was obvious that interns feel happy and satisfied in their relationship with clinical supervisors when they feel at ease to ask questions without fear of being judged.

Trust and rapport between supervisor and intern were highlighted as key elements in the relationship without which the interns will not be prepared to expose his/her vulnerable true side; to discuss openly what they know and what they do not know. Recent interns also indicated they avoided seeking guidance from supervisors who were not approachable or unsupportive. There was congruence among all groups of participants on this point. In fact, the physiotherapist' focus group rated supervisor-intern relationship of absolute importance for training effectiveness. Current interns expressed that they would feel at ease to be their real self only if the relationships were sincere, open, non-hierarchical, and non-judgmental. Nonetheless, most current interns indicated their preference to keep their distance from supervisors;

basically to keep the relationship formal and cordial. Supervisors seemed aware that interns were fearful of asking questions during supervision for fear of being judged and penalised in their formal performance review. Some supervisors expressed that the relationship should be objective and focused on intern's learning, improving of clinical skills and overall development. My gut feel after listening to all the feedback was that perhaps supervisors needed more guidance on how to handle their supervisor-intern relationship with 'tough love'; the fine balance of setting (and expecting) high standards of practice and at the same time nurturing and supportive.

A physiotherapist-participant expressed an interesting viewpoint that the supervisor-intern relationship should not be a top-down condescending operative as both interns and supervisors have much to learn from each other; one to learn the practice and the other to learn how to educate. Good communication was highlighted by physiotherapists as vital to avert any negative feelings between the supervisor and the intern. Open communication between both was also important for the relationship to build understanding and trust, and to allay fears. Interns appeared to be fearful of being criticized, being looked down or being judged when they ask questions. Such fears can be crippling and discourage interns in their learning journey.

Table 3c below displays some indicative quotations on Intern-Supervisor Relationship by sub-themes that affect effectiveness of clinical internship.



Table 3c: Indicative quotations on Intern-Supervisor Relationship by sub-themes

Sub- theme ('Child' nodes)	Indicative Quotations
Positive / Negative relationship	<p><i>"...when she is at work or coaching me, the line is very clear. We are very serious, but that's good because that makes me more comfortable . . . like what we are discussing; I am more truthful in presenting how I normally handle the patient, . . . like tell me whether I am doing the right thing and where I am wrong and give me the overall formal feedback. Whenever I have problems, I feel very comfortable asking her as well. I don't have the fear of being judged or being marked down or put on a blacklist. I just feel comfortable." (I)</i></p> <p><i>"...it's very important because if there is no trust or there is no rapport, it's very hard for the intern to share their difficulties, their weaknesses, with the supervisor. If the supervisor is very stern all day, they (the interns) have a different way of learning. Or they are not as nurturing, then it becomes very hard to connect or communicate with them. ...it will just be like 'never mind, I'll just learn by myself'." (RI)</i></p>

Legend: I = Intern, CS = Clinical Supervisor, RI = Recent Intern, P = Physiotherapist

#### **Theme 4: Environmental factors**

There are forces or influences in the workplace ecosystem that exert an impact on the intern (learner), the clinical supervisor (teacher) and the clinical education agenda. The issues drawn from Focus Groups pointed to influences of workplace culture, organizational support, workload-manpower census and role modelling.

i. Workplace culture

The workplace environment in supporting interns progressing through their learning journey was as varied as the types of colleagues working in the system. Current interns found the environment to be generally collegiate but had their fair share of negative experiences which were unfriendly or unsupportive such as judgmental seniors who discussed their mistakes openly and unhelpful ward nurses who were less accommodating. They described the conduciveness of (inpatient) ward environment for learning to be varied depending on the attitudes of colleagues, the level of busyness in the wards and individual staff's priorities.

Supervisors felt that interns just needed survival skills (be street-smart) and should be able to manoeuvre in the current learning environment which they thought was generally favourable. Supervisors sensed that the support of senior physiotherapists as alternative resource persons to interns was useful; to impart knowledge and provide professional guidance. In addition, seniors have helped to buffer the tension and anxiety felt by interns with regards to making mistakes or the fear of penalty for asking questions. One supervisor felt that building a workplace culture of lifelong learning would be a better proposition to improve clinical practice; where there is continual sharing and learning by all and with all. The physiotherapists opined that a workplace culture that is open to asking questions is essential to promote continuous learning. The culture should also be forgiving and gentler with novices.

The physiotherapists made some interesting comments concerning the internship program being perceived as an exclusive supervisor and intern affair and the lack of information on the internship program being shared with the bigger community. They expressed that involvement of the larger community of physiotherapists was minimal. They felt that not tapping on the community of physiotherapists fully might be a pity as they could participate in the teaching and foster learning by interns and all as part of workplace culture.

ii. Organizational support

The physiotherapists suggested that there were too many interns assigned to one clinical supervisor, and that this resourcing might adversely affect the quality of interns' training. In terms of organizational support, the physiotherapists felt that the clinical teams were generally very supportive of interns and clinical supervisors. They helped with caseloads whenever possible and were happy to stand-in as coaches when supervisors are not available. The seniors were also willing to assist interns with 'finding' suitable patients for the coaching session and to offer professional support in their learning journey.

iii. Workload-Manpower census

Current interns struggled with managing their clinical load and training at the same time. They expressed that workload pressure was high because of the full patient load they were tasked to achieve. They felt that as a new practitioner, handling a workload similar to more experienced seniors is very tough and takes a toll on their training. The inpatient posting appeared most challenging and stressful for the intern in contrast to outpatient setting where the case load can be built up from manageable numbers (2-3 cases to start off) to full case load (12 cases a day).

A recent intern highlighted that the physiotherapy department places high emphasis on workload statistics as key performance indicator for the clinical teams and individuals. Interns were subjected to the same performance targets as experienced staff and were therefore under tremendous pressure to clear patients. Recent interns added that case load situations got worse when there is shortage of manpower. Interns would be expected to cover absent colleagues in clearing patients as a service priority; this was at the expense of their coaching session. The physiotherapists observed that coaching of interns was compromised whenever supervisors and interns were faced with challenges of high workload and manpower crunch; sessions were shortened or cancelled.

Recent interns pointed out that providing coverage for absent colleagues was another stressor. This was because interns were afraid that their planned treatment / prescription for the patient might be different from the primary therapist. All these stressors have become barriers to the interns' learning process.

Supervisors suggested that interns felt the pressure of work most acutely as they were undergoing role transformation with the associated new responsibilities from student to therapist. Additionally, they had to cope with an increase in patient load from 4 - 8 patients during student days to 12 or more a day as a practitioner. Supervisors observed that when the intern encountered difficulties to clear patients, coaching sessions with them were sacrificed. In addition to patient load, interns had case studies and presentations to prepare, and paperwork to submit (example: documentation of supervisory hours clocked).

#### *iv.     Role modelling*

Looking back, recent interns were able to view the value of role models who had depth and breadth of skills to guide their thinking process on treatment techniques. One recent intern emphasized that 'modelling' after the teacher was critical at the early stage of their entry to practice until they progress on to autonomy with their own practice 'style'.

Recent interns also noted that role models were important for the values they espoused, the inspiration they aroused, the professional behaviours and attitudes they displayed that juniors and interns can emulate as they progress through the stages of their professional life. One recent intern described how she drew inspiration from role models towards achieving career and professional goals “*not just thinking about your own needs and the things that you want to do, but thinking about patients*”.

Table 3d below displays some indicative quotations on Environmental Factors by sub-themes that affect effectiveness of clinical internship.

Table 3d: Indicative quotations on Environmental Factors by sub-themes

Sub- theme ('Child' nodes)	Indicative Quotations
Workplace culture	<i>"...you work in different wards; you are exposed to different environments ... different colleagues. Some colleagues in the different wards, they provide different assistance; some wards . . . the nurses will go 'I will hold this patient for you' ... but some wards, the nurses will be like 'I want to get my job done first, ok!'. So, you don't feel so inclined to schedule that patient for coaching." (I)</i>
Organizational support	<i>"There should be thorough plan in the training, ... so that even those members who are not coaches... who are not involved, will know that this week...the focus is on hips or strokes... so that they can be part of the learning faculty... because everyone can contribute to the learning... it becomes more of a very nice learning environment.." (P)</i>
Workload-Manpower census	<i>"As a newbie, of course, I will be struggling with learning, coaching (sessions) and seeing my patients. It is difficult to learn at the same time, when we are rushing to see patients one after another . . . and still have to learn. This aspect is very tough." (I)</i>

Table 3d: Indicative quotations on Environmental Factors by sub-themes (continued)

Sub- theme ('Child' nodes)	Indicative Quotations
Workload-Manpower census	<i>"I mean your performance every month, your team meeting - they will always be talking about stats, and the department is always about how... whether we are truly seeing the number of patients we should see. But sometimes because of workload pressure you have to compromise on your own learning. Example, I have to cancel coaching because we really have not enough people to cover patients. A lot of MCs (medical certificates – for sick leave) ..."</i> (RI)
Role modelling	<i>"In the beginning, ... at least there's someone whom we can first look up to and trust, and copy the way they do things, because we don't have our own style of doing things. So that's the first stage where we begin to learn and find our own identity and ... learn from... someone I can look up to and is someone whose style of doing things fit me. ... I mean, in the beginning may be copying, in that sense. But, eventually you will move on from there towards our own style."</i> (RI)

Legend: I = Intern, CS = Clinical Supervisor, RI = Recent Intern, P = Physiotherapist

### **Theme 5: Coaching activity**

Coaching activity was a new theme that emerged inductively from the data. Coaching constitutes a vital part of the clinical supervision process as it facilitates the highest form of professional learning. The coaching activity is training in action where the clinical supervisor is engaged with the intern teaching and guiding the application

of knowledge and skills in the treatment of clinical conditions. Interns at the beginning of their professional career often require more directive guidance to develop their clinical skills. Different approaches might be adopted by clinical supervisors in coaching the learner in aspects such as clinical reasoning and applying the right treatment techniques for different clinical conditions. Coaching approach for physiotherapy internship has emerged as an important theme from my research data. There appeared to be issues and challenges experienced by both interns and supervisors in this area of education supervision concerning roles and expectations of the learner and teacher, the relationship between the two, coaching skills and coaching processes.

There is limited information in the medical and allied health literature about coaching as a learning tool for self-development (Manek, 2004). Search of the literature on clinical coaching process and guidelines in physiotherapy and health related professions produce scant information. Coaching is, however, more talked about in competitive sports, business setting and management (Driscoll and Cooper, 2005; Manek, 2004). Coaching involves a relationship between two people, the interaction between them is work-related, and the objectives of coaching are related primarily to personal performance and effectiveness in the workplace (Manek, 2004; Ervin 2005). Narayanasamy and Penny (2014, p.569) highlighted that relationship is an important factor in coaching and must be founded on “trust, respect, openness, honesty and unconditional positive regard” as the nurse being coached needed to “feel secure, valued, understood and validated” by the coach. Driscoll and Cooper (2005, p.21) suggested that the coaching relationship should be a supportive and reflective alliance between the coach and the learner that is “future focused rather than problem orientated”.

Coaching is learner-centred and clinical supervisors would need to be skilled in coaching methods to support the student's learning process. Effective coaching encourages the development of autonomy and independence through motivation, reflective questioning and stimulating critical thinking in the repertoire of supervisory tools (Perrault and Coleman, 2004). McNelis et al (2014) proposed that clinical

coaching should focus on engaging student nurses in higher order thinking skills to promote clinical reasoning. For effectiveness, clinical coaching should involve a framework of engaging students in the deliberate practice of reasoning skills through cognitive questioning around the nuances of individual patient situations, and the provision of feedback on that practice (Jessee and Tanner, 2016). Ervin (2005) suggested that clinical coaching as a strategy should also develop critical thinking skills as foundational knowledge and skills to achieve evidence-based practice as a norm.

Comments on this theme were mostly made by current and recent interns; they were largely congruent. Recent interns refer to the immediate past batch of graduates who completed their internship within the last 12 months. Unsurprisingly, because of recency of their training experiences with the current program, their opinions are more likely to match than differ those of current interns. With the benefit of hindsight, this group of recent interns could be tapped on for their opinions and insights into the elements of training that had most effect and impact on their transition from students to practitioners. The following sub-sections offer a detailed explanation of this theme, along with some illustrative quotations from participants (see Table 3e). The sub-headings correspond to the labels of “child-nodes” in the thematic analysis.

*i. Coach availability*

For clinical education to take place, the intern and supervisor need to set aside time to come together for coaching. Current and recent interns expressed similar sentiments about the major difficulties they encountered in arranging suitable times for coaching with their clinical supervisors. They perceived that their supervisors were constrained by other administrative commitments and clinical responsibilities and thus have difficulty finding time to coach them.

The accessibility to assigned supervisors who were not physically around (e.g. on part-time work) or not from the same clinical team as the intern (e.g. Geriatrics



posting) posed issues as well; interns encountered difficulties getting hold of them (such as due to conflicts in schedules) for consultation and discussion of cases. Recent interns shared that they resorted to peers for learning and support whenever supervisors were not available to coach. On the positive side of things, situations where the interns were in close proximity of their supervisors; example the open gym, allowed ease of access to the supervisor for an immediate learning consult.

The availability of the clinical supervisor appeared to be related to the posting location. Recent interns shared that the likelihood of coaching sessions or supervisor-mediated learning opportunities to happen were usually situated in the outpatient setting. Planned coaching sessions in outpatient setting where supervisors would see scheduled patients together with the interns usually proceeded without disruptions. More challenges were encountered in the inpatient setting. Recent interns expressed that there was a lot of uncertainty in arranging the coaching session with their supervisors; even if time was booked earlier with the supervisor there were typically last minute changes which becomes disruptive. At times, they managed to find good (patient) cases for the coaching session but had to forgo the activity as their clinical supervisors were not available. Besides disappointment, last minute changes by supervisors also created feelings of tension, uncertainty, reduced preparedness and greater anxiety for them.

## *ii. Client (patient) factors*

As coaching also involved 'practice' on real patients, availability of and accessibility to these clients were essential. Recent interns indicated that it was not easy to get suitable patients for coaching. Current interns, on the other hand, expressed difficulties coordinating all 3 parties (supervisor, patient and intern) to be available at the same time. In the outpatient setting, patients might at the last minute backed out from their agreement to be 'practised on' by the intern or failed to turn up. At times, they appear late resulting in less than optimal training experiences.

Client issues were different in the inpatient scenario; a patient might decline a request citing 'feeling unwell' or a scheduled coaching time might be disrupted because of changes in patient's health condition. The 'appointed' time might also become conflicted because of new arrangements for tests, X-ray scans or procedures ordered by medical staff for the patient. Whilst hospital inpatients were 'captured' clients, scheduling them for a coaching session appeared to be comparatively more challenging than outpatients because of dynamic conditions, arising from fluctuations in patients' health status and the changes in medical decisions. These clinical, administrative and operational issues affected the 'productivity' of the coaching session or learning opportunities for the intern.

### *iii. Coaching and learning styles / methods*

The coaching process is extremely important; how it is conducted in terms of manner or style, the tone, and content, determines if it promote learning and development. Interns have preferences for learning methods; some would like to observe a real case first then read up; some prefer hands-on, read up and then ask questions; and some others prefer discussion on theory and clinical reasoning before going hands-on. Most interns felt that in the early stage, understanding the rationale or theory of things is important before going hands-on.

On the other side of the dyad, different supervisors adopt different styles of teaching; some are more interactive, others would go straight to observation of interns treating patients. Recent interns also opined that there were many other clinical and practical aspects in disease management that they did not know or aware of for which they should be taught or given an exposure to. The varied approaches to training, assessment and feedback by different supervisors can be confusing and challenging for the interns as they rotate to different clinical disciplines and teams. As physiotherapy practice is practical and skill-based, the coaching process that most interns prefer is to observe their supervisors demonstrating the hand placements and techniques on the real patient during assessment or therapy, ask the questions, then go hands-on and receive immediate feedback.

Overall, learning experiences with different supervisors were varied; some interns were satisfied and others felt less so with their approach to coaching. One intern-participant expressed her dislike for the “dictatorship style of coaching session” that she experienced. A recent intern compared the coaching approaches of different supervisors, describing some to be thorough and had clear training objectives while others handled the training in an unstructured laissez faire manner. A few intern-participants opined that imposing one’s style of teaching without considering the learner’s learning needs may not work well for the learning process as some interns were not receptive to the particular coaching approach.

Manek (2004) suggested that the spectrum of learning styles based on the push-pull model of learning, ranges from directive (told learning) to non-directive (self-learning). In the early stage, directive learning via telling and instructing may be relevant for the beginner learner in solving problems. As the learner progresses, a non-directive approach to facilitate self-learning becomes a much more powerful tool. In the same vein, coaching skills needed across the spectrum of learning would range from instructing to listening.

Whilst coaching and learning methods or styles are numerous, focus group participants unanimously agreed that communication between the supervisor and intern on preferred choices were pertinent to achieving optimal training experiences for both. A recent intern expressed her suboptimal learning experience because of misfit of teaching and learning styles between the supervisor and herself; the supervisor was inclined towards discussing techniques and theory, but she wanted more discussion on actual cases.

Current and recent interns suggested that the learning focus and choice of methods; theoretical-based through discussion or techniques-based through practical hands-on activity, could be planned or discussed ahead of time between supervisor and

intern. This would dispel misunderstanding between them and also assure consistency in impartation of knowledge and skills to all interns.

iv. Coaching in the presence of clients

The opinion was unanimous from all groups of participants that coaching in the presence of real patients was a stressful and uncomfortable activity for interns. The supervisors observed that interns were anxious and nervous during coaching sessions, and some were not able to express themselves well or demonstrate what they know under duress. Supervision was described by interns as ‘scrutiny’ and ‘too close for comfort’. From the accounts shared by current and recent interns, perhaps it was the ‘manner’ of coaching and ‘tone’ of feedback by clinical supervisors that impacted the overall learning experience. Some interns expressed dissatisfaction with the manner or style the coaching was conducted. Descriptive comments such as *“dictatorship style of coaching session”, “I act out for the sake of showing my coach that I am right”, “staring at you seeing a patient”, “I need to know that my coaches are not judgemental”* underscored the discomfort and anxiety interns faced during the coaching sessions.

A couple of interns expressed their fear of making mistakes and being judged for them. They felt vulnerable under the close watch of their supervisors. Recent interns shared similar ordeals of being under tremendous pressure and discomfort when supervised in front of patients. Their negative accounts described the lack of tact by supervisors when giving feedback in the presence of patients which demoralized them and affected their confidence. They had, therefore, tended to do what their supervisors taught or expected of them than demonstrating and discussing their own techniques. One intern commented that she had to put on a front to show she is knowledgeable for fear of being seen in a bad light when perhaps she could have more to learn from the experienced supervisor. A recent intern shared a similar personal account of following the supervisor’s style of doing things in order to appear right, even though she may perform otherwise under normal circumstances. In my

opinion, there is cause for some concern, as this process of supervised training is not developmental.

Supervision and coaching of interns in the presence of patients should indeed be conducted in an ethical and respectful manner for the sake of the patient (client) as well as the intern as shaking the confidence of either would have adverse effects. One supervisor noted candidly that supervision of interns should adopt a peer mentoring approach rather than top-down manner.

v. Protected time for learning and coaching

Setting aside time for coaching interns was strongly advocated by clinical supervisors; the physiotherapists' focus group felt supervisors were accorded sufficient dedicated time to do that. Nevertheless, recent interns did not think that it was effectively used, especially in the inpatient setting where there was less control over patient and ward conditions on top of busy supervisors coping with their own clinical load or administrative work. A physiotherapist-participant observed that supervisors cancelled or cut short the coaching session whenever they were hard pressed for time such as when there were manpower shortages.

Recent interns highlighted that whilst clinical supervisors were given dedicated time for coaching / teaching, it was not the case for interns. The latter did not have allocated or protected time for coaching and learning activities. They opined that dedicated time to do self-study, to think and to reflect was important for their learning process. Driscoll and Cooper (2005) suggested that effective clinical supervision relies on coaching sessions being productive and a framework or structure to these sessions is therefore needful.

Table 3e below displays some indicative quotations from Focus Group participants on Coaching Activity by sub-themes that affect effectiveness of clinical internship.

Table 3e: Indicative quotations on Coaching Activity by sub-themes

Sub- theme ('Child' nodes)	Indicative Quotations
Coach availability	<p><i>"Time is a huge factor. I mean the time that the coach has available for the mentee and the mentee being able to have that time for that day to see the patient with the coach or have a coaching session. It has to come in together at the suitable time and day both mentor and mentee are available for coaching to happen." (I)</i></p> <p><i>"...because I was in outpatient setting, so we are near to each other, almost side-by-side. So if I have any questions I can just go beside her and ask her. So that was quite a conducive environment for learning..." (RI)</i></p>
Client (patient) factors	<p><i>"In fact a lot of my patients cannot come the time that I want to coach from. ... So he [supervisor] will say: "Okay if I'm free I will pop by". But it's very difficult, you see. ... Sometimes, you know, patients come late; we can't get anything (going)... we don't have the time to discuss; we have to discuss over lunch." (RI)</i></p> <p><i>"... sometimes you tell them in advance and they are ok, then later they tell you 'I am tired, I don't want already'." (I)</i></p>

Table 3e: Indicative quotations on Coaching Activity by sub-themes (continued)

Sub- theme ('Child' nodes)	Indicative Quotations
Coaching and learning styles/methods	<p><i>"I like hands-on, but it's a lower priority than discussion. Because it's only through the clinical reasoning then I can... translate it into hands-on. So if we don't talk about it but we straight away do the hands-on things, I may not know what I'm doing. I'm just good at; okay I know where to hold and stuff. But I don't know why I am holding, and what am I looking out for." (RI)</i></p> <p><i>"I prefer to observe the supervisor first in case I do something that is not very good for the patient. Not as good as what my supervisor can offer . . . after that I would [like to] try, then get corrected on the spot." (I)</i></p>
Coaching in the presence of clients	<p><i>"...they immediately give feedback that "you shouldn't be doing this". So that makes us feel ... demoralized and in front of the patient. So there are supervisors who do that. And then there are supervisors who totally don't say anything. And then sometimes we don't know what to do, and they don't say anything. And I mean, we also don't want to... ask right in front of them (supervisor and patient) and then on the spot we feel very, very pressured because we don't know what to do." (RI)</i></p> <p><i>"...whenever there is someone watching me, I do things that I usually don't do. ... I mean it becomes very unnatural. And I feel that I am not able to do my own way of things, I am not able to show my style ... because I feel imposed to follow the supervisor's style of coaching. ...I felt pressured that I must do the way the supervisor does his things. So, in that sense... you know I felt that I'm not learning things that I want to learn." (RI)</i></p>

Table 3e: Indicative quotations on Coaching Activity by sub-themes (continued)

Sub- theme ('Child' nodes)	Indicative Quotations
Protected time for learning and coaching	<i>"...like how many percentage of your working hours is to coach and how many of your other hours is for clinical or admin work."</i> (CS)

Legend: I = Intern, CS = Clinical Supervisor, RI = Recent Intern, P = Physiotherapist

### **Theme 6: Internship program**

The theme on 'Internship program' was recognized as an emerging theme from Focus Groups; perhaps the current internship program is new and attracted reviews from participants. For a start, current interns perceived that the current internship program did not make the mark for training effectiveness as the survey findings revealed ratings in the mid-range below score of 7, on a scale ranging 0 to 10. The key findings pertain to the need for clarity of mission and purpose of an internship program, the structure and form in terms of curriculum, training requirements, training sites and resources.

#### *i. Mission and purpose*

The mission and purpose of internship needs to be well articulated to bring clarity to key stakeholders; interns and clinical supervisors alike, so that their roles and responsibilities are discharged purposefully. Supervisor-participants had highlighted the need for setting specific goals for interns *"to improve their deficits, their clinical skills"*. The clocking of supervisory hours and documentation is procedural and interns as well as clinical supervisors must be cautioned not to be blind-sighted by the process from the intent of clinical internship.



ii. Training curriculum (program structure, case variety)

Recent interns; as the inaugural batch of interns to undergo the program, expressed their satisfaction with the organisation of a formal internship program for entry level practitioners. Training was felt to be more structured and assured of quality with the assignment of supervisors and required coaching hours. The community of physiotherapists thought that a standardised program with structured training elements and scheduled learning activities would ensure consistency of training for all fresh graduates and achieve the desired education outcomes. The clinical supervisors were unanimous that the training program should rotate interns to wider areas of clinical practice so that the new practitioner may be proficient and confident to practise in all general cases at the end of the training. There was concurrence from interns (current and recent) and clinical supervisors that exposure to both inpatient and outpatient settings and core clinical disciplines (Orthopaedics, Cardiopulmonary and Neurology) in 1<sup>st</sup> year internship training was essential for interns to better prepare them for future practice.

Current interns proposed that an orientation program at commencement of each clinical placement could serve as a refresher to prepare interns for the clinical training experience. The physiotherapists opined that exposure to multidisciplinary environment should be encouraged to promote broader understanding of the holistic care of patients. Recent interns concurred on this point, and expressed also their disappointment on the lack of learning opportunities made available to them such as external courses and talks conducted by overseas experts.

Training in a wide variety of clinical cases was generally viewed as important to better prepare the graduated student for professional practice. All Focus Group participants noted that the Singapore General Hospital provided excellent training opportunities for interns. As the largest general tertiary hospital in Singapore, it manages high volumes of clinical cases in all medical and surgical disciplines, in variety and clinical complexity. The disadvantage of high patient volume is the workload pressure it inflicted on our supervisors and interns; this being due to

service obligations and exigencies to treat patients first over training needs. The downstream effects on interns were physical exhaustion and time challenges – the constant tussle for self-study time, for reflection, for educational activities and so on; as expressed by interns.

*iii. Training requirements and targets*

Recent interns shared that they were expected to write down clinical reasoning for their cases, which was good as it forces them to “go back and think about the patient and reflect on their practice”. This training approach is developmental and merits adoption.

Planning and organising learning activities and resources to meet the intern’s and program’s training objectives appeared to be lacking. Current interns expressed that they struggle with information overload and the high patient load that they have to manage. There was too much to read because of many case types. The high workloads have led to burnt-out as interns felt too tired at the end of the day to do their reading. It also affected their finding time to seek out suitable patient (client) types for coaching with their clinical supervisors. Some interns expressed difficulty to meet AHPC requirement for Level 1 supervisory hours (4 hours coaching / week).

The supervisors expressed their angst with the paperwork involved, which was largely administrative requirements by the regulator Allied Health Professions Council (AHPC). Basically, supervisory hours needed to be logged and signed, and evaluation reports of interns to be submitted at regular intervals. Recent interns also thought that the documentation was cumbersome and time consuming.

iv. Training sites and the work realities

The training sites or settings presented unique work realities, which were highlighted by interns as significant challenges or obstacles for them. The inpatient setting was observed by most as a more challenging learning environment than outpatient because of more uncertainties such as changes in patient's medical condition and treatment plans; high caseload; manpower shortages; scheduling conflicts and lesser time flexibility. Interns, therefore, felt fully stretched and highly stressed during inpatient posting arising from ad hoc coaching arrangements and potential last minute changes. The physiotherapists had similar observations of the demands and challenges faced by interns, in particular their having to accomplish the expected full patient load at the outset of inpatient posting. In the outpatient setting, the workload for the intern was stepped up slowly through the weeks; this was noted to be desirable as interns could cope better with coaching activity, learning and treating patients.

v. Resources

Interns opined that supervisors and interns alike should be given 'protected time' for the roles they assume; as teachers to be available and to coach interns well; as students to have time and space for self-study, reading, thinking and reflecting on practice. This resource was emphasised as critical for the learning process to be 'productive' (fulfil coaching sessions) and effective.

Table 3f below displays some indicative quotations from Focus Group participants on Internship Program by sub-themes that affect effectiveness of clinical internship.

Table 3f: Indicative quotations on Internship Program by sub-themes

Sub- theme ('Child' nodes)	Indicative Quotations
Mission and purpose	<i>"I need to clock in so many hours so this person [intern] can go from L1 to L2 ... but I think behind the science of being the coach or the coachee, you should really know the purpose of why it's all being done ... so it's really not for paperwork. Paperwork is not going to transform to any clinical practice kind of thing. ... I don't know who is going to do that; somebody has to make sure that both the sides understand the same thing ... the importance of doing that [internship]." (CS)</i>
Training curriculum	<i>"...the things we do in outpatient is completely different from the things that we do in inpatient. The things we ask, the things we look out for, even the tests and assessments that we do are completely different. So if we have not gone through the outpatient in the first 1 year, I think when we go into outpatient (post internship) it will be a disaster." (RI)</i>
Training requirements and targets	<i>"In outpatient we have the clinical reasoning form...and I think those were really good for us - the year 1s. ... Compared to if we did not have ... I don't know, I think I'll be very lost." (RI)</i>

Table 3f: Indicative quotations on Internship Program by sub-themes (continued)

Sub- theme ('Child' nodes)	Indicative Quotations
Training sites and the work realities	<i>"If you're in the outpatient, then workload is less of an issue, because you can block off the time for the coaching. And that means that you see lesser patients in that day. Whereas in inpatient; you can never block off the time. You will always have the same number of patients or even more, depending on how the team that day is, and how whether the team is lack of manpower, or everyone is around. Which in most cases, in most days not everyone is around so we have to cover for other physiotherapists." (RI)</i>
Resources	<p><i>"Having the time to reflect and talk to the supervisors; it will be good" (P)</i></p> <p><i>"If some days the (clinical) team is tight, then you (the coach) might just cancel the coaching session or else you might cut short (the session)" (P)</i></p>

Legend: I = Intern, CS = Clinical Supervisor, RI = Recent Intern, P = Physiotherapist

#### **4.2.3 Ranking on level of importance of the 4 literature themes** (Focus Group activity)

During Focus Groups, participants were invited to rank the 4 themes distilled from literature; intern (learner) factors, supervisor (teacher) factors, environmental factors and intern-supervisor relationship, according to their perceived level of importance in influencing the effectiveness of clinical training for physiotherapists.

The results (see Table 4) showed current interns ranked supervisor-related factors as most important in influencing the effectiveness of their internship training followed by environmental-related factors as a close second. This could be correlated with some of their comments on supervisors who were intimidating and unforgiving of their mistakes; problems of accessibility to supervisors; and the overwhelming workload pressure they experienced. The clinical supervisors, recent interns and the physiotherapists ranked intern-supervisor relationship as the most important factor to affect training effectiveness. Supervisors and recent interns accorded nearly 50 %-importance to this factor which is very significant. This was an interesting finding as this factor was not explicitly expressed during the focus group discussions. Perhaps rather than attributing the factors to solely the supervisor or the intern, they felt it would take both parties (the teacher and the learner) to ensure that clinical training worked out effectively. This is congruent with the findings of Kilminster and Jolly, 2000; Levy et al., 2009; Pearce et al., 2013) that the quality of intern-supervisor relationship is a major influencing factor on the effectiveness of clinical education and supervision.

Table 4: Ranking of the level of importance of 4 literature themes in influencing the effectiveness of physiotherapy clinical internship

	Interns	Supervisors	Recent Interns	Physiotherapists Community	
Supervisor-related factors	33 (36.3%)	20 (17.1%)	14 (19.4%)	24 (23.5%)	91 (23.8%)
Intern-related factors	9 (9.9%)	26 (22.2%)	15 (20.8%)	27 (26.5%)	77 (20.2%)
Environment-related factors	30 (33.0%)	14 (12.0%)	9 (12.5%)	18 (17.6%)	71 (18.6%)
Intern-Supervisor Relationship	19 (20.9%)	57 (48.7%)	34 (47.2%)	33 (32.4%)	143 (37.4%)
	91 (100%)	117 (100%)	72 (100%)	102 (100%)	382 (100%)

Legend:

Numbers refer to number of stickers pasted by participants

#### **4.2.4 Strategies to enhance internship effectiveness**

Focus groups were also invited to give their views on the overall effectiveness of current internship program, and to offer suggestions on how the program might be improved. Current interns opined that as much time, effort and energy is put into supporting learning / teaching by both interns and supervisors, ensuring that an internship program is effective is important to be worth it. Based on the survey mean scores from all groups; interns (6.14), clinical supervisors (5.55) and the physiotherapist community (6.45), the current internship program is not up to the mark yet. In their opinion, a good program must score at least a 7 on the 11-point scale.

Summarizing the current interns' opinions; supervisors with passion for teaching should be selected for the role. They should be relieved from non-clinical administrative roles and given 'protected time' for coaching interns. The supervisors' time availability for coaching is more important than supervisor: intern ratio. Supervisors could make the coaching sessions more productive too by letting interns know their expectations of them. From the interns' perspectives, they needed 'free-up' time to read up and do self-study. They needed relief from excessive work load as well as they are too fatigued to be making the best of their learning journey. On their part, interns should also proactively express their learning styles and expectations to their coaches so that the learning process is productive.

On training effectiveness of physiotherapy internship, the clinical supervisors expected interns to have proactive attitudes toward learning and the training. On their part, they recognised the need for their own training on pedagogy and would like to be supported by educational mentors with whom they can share or discuss ideas with on how to manage interns and how to deliver the teaching effectively. The following key points were offered by supervisor-participants to enhance current internship program;

- Both interns and supervisors to have basic understanding of each other's expectations of the learning process, and developmental needs of intern.
- Interns to be mentally prepared for tough training; develop survival skills to manoeuvre around the workplace, and taking initiative for their training
- Supervisors to give timely and ongoing feedback to interns

Gathering from recent interns' viewpoints, the key factor influencing internship effectiveness centred on coaching activity involving processes *before* (availability of coach, patient, intern; scheduling, reading materials, expectations, etc.), *during* (coaching style/method, asking questions, feedback, etc.) and *after* coaching (reflection of practice, etc.). High workload was noted as a major impediment for coaching of interns to take place. Supervisors' attitudes and approaches to coaching



and the learning atmosphere had major impact on interns' learning experiences. Pitching the teaching at entry level and ensuring the coaching environment is conducive for asking questions and learning was desired. Recent interns also suggested that tutorials, lots of feedback and hard work would ground interns with a strong clinical foundation for future practice. In terms of strategies to enhance internship effectiveness, recent interns suggested that the current style of supervision where clinical supervisor goes straight into coaching by watching the intern treat patient did not suit most interns. Preferably both supervisor and intern should first sit down to talk; set the learning objectives, communicate their learning and teaching styles, and discuss the case before seeing the patient. Another strategy was to increase the number of clinical supervisors to address current challenges faced with availability and accessibility of supervisors for coaching. This will also address future needs as increasing numbers of physiotherapists enter the workforce.

In response to their assessment of the overall effectiveness of current internship program, the physiotherapists were surprised by the survey scores from the supervisors which seemed low for most aspects. They thought the amount of time and effort invested in internship by clinical supervisors should result in good outcomes and therefore implied training effectiveness. The physiotherapists felt that supervisors might be loading the interns with too much information, too much homework, and setting too high expectations of them resulting in disproportionate pressure placed on them in their first-year learning journey. The supervisors should instead guide the interns in practical survival skills or tips to manage people and work on the ground. The physiotherapists suggested that good open communication between the intern and supervisor throughout the entire internship year was of strategic importance in achieving mutual understanding and good planning to meet the specific needs and goals of the intern. They suggested that reflections after a coaching activity by both interns and supervisors would serve both well in improving learning and teaching respectively. Inculcating a learning culture at the workplace that includes interns, supervisors and the larger community of physiotherapists was proposed as a strategy to improve learning experiences of these novice practitioners.

The strategies to improve internship drawn from the conversations with Focus Groups are summarised in Table 5.

Table 5: Strategies to improve internship

<i>a. <u>Coach-related</u></i>	
Interns:	<ul style="list-style-type: none"> <li>i. Select supervisors with passion for teaching</li> <li>ii. Give supervisors protected time to do coaching</li> <li>iii. Supervisors must be committed to making themselves available for coaching</li> <li>iv. Communicate with interns on their expectations</li> </ul>
Supervisor:	<ul style="list-style-type: none"> <li>i. Communicate with interns on their expectations</li> <li>ii. Give regular and timely feedback to interns</li> </ul>
<i>b. <u>Learner-related</u></i>	
Interns:	<ul style="list-style-type: none"> <li>i. Give interns protected time to do self-study and reading</li> <li>ii. Assign to interns an acceptable clinical load</li> <li>iii. Communicate with supervisor on learning styles and expectations</li> </ul>
Supervisor:	<ul style="list-style-type: none"> <li>i. Communicate with supervisor on learning styles and expectations</li> <li>ii. Interns to have mental preparation for their training, to develop survival skills, to take initiative in training</li> </ul>
<i>c. <u>Program-related</u></i>	
Interns:	<ul style="list-style-type: none"> <li>i. Refresher (orientation) workshop in the specific clinical discipline at commencement of rotation</li> <li>ii. Wider exposure to core disciplines in 1<sup>st</sup> year</li> <li>iii. Adopt coaching approach: 'coach show, I do, coach give feedback'</li> </ul>
Recent interns:	<ul style="list-style-type: none"> <li>i. Learning opportunities from many other sources should be open to interns e.g. talks / courses by experts, specialists, multidisciplinary meetings</li> <li>ii. Before seeing patient: to discuss case, coaching approach and learning goals</li> <li>iii. Increase number of clinical supervisors to meet current and future needs of novice physiotherapists</li> </ul>
Physiotherapists:	<ul style="list-style-type: none"> <li>i. Training to be well organised and systematically implemented</li> <li>ii. Clarity of learning goals and plans throughout training through timely and open communication</li> <li>iii. Reflective practice</li> </ul>

## **Chapter 5**

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# **DISCUSSION OF FINDINGS AND RECOMMENDATIONS**

## **Discussion of Findings and Recommendations**

My research objective was to involve stakeholders as co-inquirers in problematizing our issue on clinical internship and then be enthused to take ownership for next steps towards making improvements. Six major themes or factors were uncovered from empirical data to have impact on the effectiveness of our clinical internship for physiotherapists. The next steps were to generate actionable strategies; these recommendations would be practicable, incorporating the 'what' and 'how' to improve the training program. Drawing on the ideas and suggestions from in-depth discussions with Focus Group participants, and weighing in with my previous personal experiences (as chief preceptor of pre-registration pharmacists' training); I have developed the proposals for change action. The literature was explored concurrently as well to view more widely if there were solutions and ideas that others with similar issues have generated. Literature as a resource can help support proposals or conclusions with credible evidence.

The agenda for change constitutes an important part of my participatory research to inform action. Some of the ideas and strategies to enhance physiotherapy internship were contributed by stakeholder-participants during Focus Group discussions. This is an important aspect of the collective effort to find practical solutions in resolving organisational issues and promoting self-efficacy. The proposals developed were subsequently discussed with influential leaders of the physiotherapy department (see Chapter 6), so that specific follow up actions may be taken as next steps to improve the current internship program. The recommendations are organised as broad categories according to the implications they have for particular set(s) of stakeholders.

## **5.1 Recommendations for restructuring of internship program**

Restructuring of internship program has implications for all stakeholders; the education director and leads, interns, clinical supervisors, as well as the community of physiotherapists. The following proposals are to address specific issues faced in our current internship:

- 5.1.1 Incorporate compulsory rotation to inpatient and outpatient core disciplines
- 5.1.2 Incorporate a segment on 'preparing for your internship' in the General Orientation program for interns
- 5.1.3 Organise refresher or induction workshops at the commencement of clinical rotation
- 5.1.4 Organise new routines for coaching activity (before, during, after)
- 5.1.5 Design training assessment in a format that tracks the developmental growth of intern at regular intervals
- 5.1.6 Accord interns and clinical supervisors 'protected time' per week for educational purposes
- 5.1.7 Organize an acceptable workload for interns
- 5.1.8 Solicit regular feedback on internship program
- 5.1.9 Promote safe climate for interns to ask questions

They are discussed in greater details here.

### **5.1.1 Incorporate compulsory rotation to inpatient and outpatient core disciplines**

The first year of training for the novice physiotherapists should cover the general core disciplines in inpatient and outpatient settings. This will ensure comprehensive coverage to sufficiently transit student training to real-world practice where the novice will be able to handle any general case. This was expressed as an important point by current and recent interns with concurrence of clinical supervisors; that the goal of internship would be to prepare and qualify fresh graduates for entry to professional practice. Student participative experiences (Sheehan, Wilkinson and Billet, 2005) and exposures to diverse clinical placement sites and learning opportunities (Chuan and Barnett, 2012) were noted to be crucial in supporting experiential learning for the development of clinical practice skills. The outcomes of

entry-level professional education should at least lead to minimal standards of competence (Black et al., 2010), and the new practitioner capable of working independently. The core areas in the clinical training framework should be systematically applied and consistently implemented for all interns. One recent intern (participant) informed that she was assigned to inpatient for a whole year; at the point of the focus group interview, she has yet to be posted to outpatient for work exposure. She had expressed some apprehension about how she would practise in outpatients if and when she is posted to that area.

#### 5.1.2 Incorporate a segment on 'preparing for your internship' in the General Orientation program for interns

Interns could be better prepared as they embark on their journey to real-world practice. During the General Orientation, a segment to specially address how they can prepare for their internship journey would be beneficial in terms of expectations and taking responsibility for their learning process and growth.

Attitudes that would put them in good stead could be listed and shared with them; the following were contributions (not exhaustive) drawn from Focus Groups:

- Be proactive; take ownership of your learning
- Be prepared for case discussions, coaching sessions
- Ask questions as they stimulate thinking and learning
- Be open to feedback from supervisor and seniors
- Be humble to learn and not fear correction
- Be sincere and build trust in the relationship with supervisors

The first year of practice can be a challenging one for interns as they 'learn the ropes' and experience the 'real world' of the clinical environment and practice community (Black et al., 2010). As described by a recent intern participant, developing survival and time management skills will help the intern to manoeuvre the

system more efficiently and productively in the clinical community. Such guidance offered at commencement of internship will help the intern to better anticipate the job realities, and to optimise their clinical learning experiences amidst service work to be performed.

#### 5.1.3 Organise refresher or induction workshops at the commencement of clinical rotation

Refresher workshop at the commencement of each clinical rotation could be incorporated into the program as recent interns had found them helpful to refresh their learning again. This was particularly useful as some of the topics were learnt quite some time ago during student days. Some interns had indicated that there were clinical areas that they had never been exposed to during student attachments. The learning curve would be steep for these interns and such a workshop could orientate them more quickly and boost their learning experiences.

#### 5.1.4 Organise new routines for coaching activity (before, during, after)

Driscoll and Cooper (2005) proposed that embracing a developmental coaching approach in clinical supervision activities is transformational wherein the coach challenges, stimulates and guides the learner to grow and to develop. They suggested that a framework or structure should be imposed for coaching sessions to be productive and for coach and trainee to navigate their ways through.

The coaching activity is an essential component of internship as the transfer of knowledge and skills techniques to novices take place through interaction, discussion, demonstration and instruction. A lot of valuable inputs were offered by current and recent interns as key stakeholders in this activity. There is good evidence from the focus groups that coaching activities were not always well organized; coaching sessions were cancelled or shortened when supervisors and interns were under constraints of heavy workload and manpower crunch. Interns, in

particular, faced major challenges in managing training and work. They expressed the excessive pressure they are subjected to having to manage the full clinical load similar to seniors on top of the learning to do. In addition, they are roped in to provide relief coverage for absent colleagues, and at times had to sacrifice their coaching session to see patients.

The following general pointers originating from Focus Group discussions should be incorporated into coaching practice guidelines:

- a. Coaching schedule and types of clinical cases to be seen should be well planned

Unscheduled and ad hoc plans are disruptive and had caused unnecessary anxiety for the intern.

- b. Interns and supervisors to be given allocated or protected time for coaching activities

Allocating and ring-fencing dedicated time to both intern and supervisor will ensure learning and teaching can take place and not left to chance or luck

- c. Interns are to communicate honestly without fear and be open to feedback whilst supervisors should adopt a non-threatening and respectful demeanour in their communication with interns

Interns should communicate honestly what they know and do not know rather than put on a front by providing 'model answers' to their supervisors as they deprive themselves from learning more fully. Similarly, a supervisory process that is intimidating and disrespectful of the intern can be devastating in eroding professional confidence of the intern. Open communication is crucial as it encourages dialogue, feedback and consultation. Relationships between intern and supervisor will be strengthened when it is built on honesty, sincerity and mutual respect.

New routines for the coaching activity are proposed, by delineating the coaching process to encompass 'before', 'during' and 'after' the activity. The points of concern registered by Focus Groups have triggered the need for a re-think by clinical supervisors and physiotherapy education leaders on the whole practice and process



of coaching, and what clinical supervisors should observe to improve the learning experience for interns. Conversations on this suggestion to 'structure' the coaching session were initiated with participants during Focus Groups to stimulate reflection and provoke further thinking regarding necessary change.

### Before coaching

- i. Set goals and expectations.

This is critically important as wrong expectations can lead to misunderstanding and displeasure with one another. The physiotherapist' Focus Group concurred with interns that supervisors might be setting too high expectations of interns which led to the latter feeling pressured and anxious. Mamchur and Myrick (2003) found poor communication of expectations as the source of conflict between student nurses and their preceptors. Burns et al (2006) suggested that role expectations of student and preceptor must work in synchrony for good learning outcomes. A useful point for supervisors to bear in mind is that interns are fresh out from school; so, their clinical abilities and comfort level to take immediate full responsibility for the patient will need to be calibrated as they progress through internship. More guidance and support may be needed at the initial phase until they gain increasing experience and confidence before reaching autonomy. Cole and Wessel (2008) proposed that discussion between the supervisor and student about learning needs and expectations is an important strategy to maximise students learning.

- ii. Ascertain intern's learning styles and blend in supervisor's teaching styles

Discussing the preferred learning and teaching styles between intern and clinical supervisor prior to a clinical rotation would be beneficial in supporting the intern's learning and development process. Understanding each other's styles would allow adjustments by one another to support the learning needs of the intern in an optimal manner. On this count, supervisors could be more learner-centric. The aim of teaching is to facilitate learning and part of this process is that educators understand

intern learning behaviours (Mountford Jones and Tucker, 2006). Current and recent interns were impassioned when they shared about the mismatch of interns' learning styles and their supervisors' teaching styles. Interns' satisfaction of their learning experiences might be influenced by this factor to a major extent as interns described their learning as suboptimal when there was misfit of styles.

### During coaching

#### i. Give full commitment to intern's training and developmental needs

One of the major difficulties encountered by current and recent interns was availability and accessibility of their supervisors. To make matters worse, it was observed that supervisors had at times cancelled or shortened coaching sessions with interns. It is important that supervisors are not distracted by other commitments and responsibilities at the expense of interns' training and developmental needs. Supervisors were already given 'protected' time for training interns; they must therefore utilise the dedicated time to coach their interns.

#### ii. Pitch teaching at intern's level

Some interns alluded that the coaching by their supervisors was pegged at a high level beyond them. They did not understand fully and did not know what questions to ask either. As experienced or specialist practitioners, clinical supervisors must take note of the point that they are training students to novices and must therefore pitch their teaching at entry level practice and not specialist practice.

#### iii. Use the coaching approach 'coach show, intern demonstrate back, coach feedback'

Majority of current and recent interns have expressed their preferred coaching approach as 'coach show, intern demonstrate back, coach give feedback'. This 'apprentice' approach is useful for skills training where the experienced supervisor can demonstrate the right physical therapy techniques and the trainee practises under the supervisor's watch. This corroborates with the findings of Ernstzen, Bitzer

and Grimmer-Somers (2009) which suggested that the activities most effective in facilitating learning in the clinical setting were demonstrations of patient management, discussion and feedback.

In addition, it will be important for interns to understand that observation and constructive feedback by their clinical supervisor is critical to reinforce correct techniques; rectify suboptimal ones; and identify and remediate unprofessional behaviour (Ramani and Orlander, 2013).

iv. Adopt fair, objective and supportive practices to encourage learning

The general guidance for supervisors is to be (and seen to be) fair and objective when coaching and monitoring the learning progress of their interns. In supporting the journey of growth and development of the student to novice practitioner, supervisors need to give allowances for mistakes and encourage questions. Examples include:

- Do not penalise intern for asking questions
- Do not be judgmental when intern makes a mistake

Current and recent interns had voiced out their fears of being evaluated negatively or 'marked down' in their performance appraisal for asking questions. Some interns had described the judgmental attitudes of their supervisors which led to their 'putting on a front' rather than be their true selves. These attitudes have adverse impact on learning and growth, and must be rectified.

After coaching

i. Adopt reflective practice

Reflections promote deeper thinking and invigorate the learning process. This practice should be conducted after the coaching activity; to have interns and supervisors to reflect on (1) the coaching session and (2) the care rendered to

patient. The process is developmental by stimulating further thinking, feedback and learning; the learning loop is useful for taking further action to improve the coaching experience or enhance patient care.

The physiotherapist' Focus Group proposed reflective practice as the way to go; by reflecting on what went well and what did not after each coaching session and reporting back to the supervisor, it allows the latter to better guide interns in their learning process including addressing gaps in their knowledge. Sellars (2004) proposed that learning gained is of limited value when reflection takes place as a personal thought or private written record, and Clouder (2000) suggested that it should be more dialogical in nature.

#### 5.1.5 Design training assessment in a format that tracks the developmental growth of intern at regular intervals

The goal of internship is to provide professional training and guidance to transform students to novice practitioners (and not specialists). By formatting the assessments according to stated competencies to be achieved, this will serve to remind supervisors to assess interns on a developmental basis rather than performance appraisal. There were perceptions by interns and physiotherapists that the clinical supervisors had different (higher) expectations of interns which tended to be exceptionable than reasonable. Morley (2009) reiterated that a tool to support and monitor evidence of interns' progress with the acquisition of clinical competence was essential in any preceptorship program.

#### 5.1.6 Accord interns and clinical supervisors 'protected time' per week for educational purposes

Clinical supervisors should be relinquished from clinical workload for their assigned periods to conduct teaching and coaching. This support is crucial so that they can focus their attention on training interns and not be distracted by other commitments.

This will need to be enforced as focus groups' participants noted that supervisors cancelled or shortened the coaching session when they were pressed for time. The 'protected time' should be utilised for educational activities instead of being spent on routine workload / service activities. This corroborates with the findings of Snowdon and colleagues that finding time for supervision was a principal barrier to effective physiotherapy supervision in an Australian public health service it surveyed. They proposed that supervision be protected from competing demands within a sustainable framework (Snowdon, Millard and Taylor, 2015). Protected or allocated time for supervision may be recommended but optimal frequency and duration of time required for clinical supervision should be considered for efficient use of the time. Dedicated time should similarly be given to interns to attend coaching sessions and to do self-study and reflections. Concurrent with this provision, the service workload for interns must be adjusted to manageable levels as the priority for them is developmental training rather than servicing patients. Current and recent interns have voiced the high stress and challenges they experienced in coping with training, fulfilling full clinical workload and, over and above that providing relief coverage for other physiotherapists at times.

#### 5.1.7 Organize an acceptable workload for interns

Caseload for interns in all clinical rotations should adopt a 'built-up with time' scheme. This will translate into a lower and manageable caseload at the beginning and increased to full load by the end of the posting when interns have gained increasing competence and confidence. This was generally the case for outpatient postings; interns felt their workload was manageable as it was stepped up with time. In contrast, Focus Groups observed that workload pressure was felt more acutely in inpatient ward setting as interns were assigned full caseloads at the outset with little time left for coaching sessions. Interns felt they were 'thrown into the deep end' and were always under tremendous pressure to clear patients.

#### 5.1.8 Solicit regular feedback on internship program

Feedback should be solicited from both interns and supervisors on their teaching and learning experiences at least twice a year; at 6 months and 12 months. This process is necessary to continuously look at opportunities for improvement of the program. Regular feedback allows gaps to be expeditiously plugged. Feedback can be obtained online or conducted face-to-face for richer details.

This proposal concurs with Black et al (2010) who opined that as professional development is continuous; contextual; and multidimensional, active dialogue on what facilitates or constrains learning and development would serve to optimise educational efforts and interns' learning experiences.

#### 5.1.9 Promote safe climate for interns to ask questions

Physiotherapy leadership and the community of practitioners should inspire and champion an environment that is safe for interns to ask questions. Such a positive environment promotes sharing, teaching, continuous learning, and importantly the professional growth and development of the intern. Learning is lifelong and this inquiring mindset needs to be nurtured from student days and into the physiotherapist's professional life.

Based on the inputs from some interns, the interactions with their clinical supervisors and some seniors were condescending and less forgiving; and asking questions was often viewed negatively. Interns felt that they were perceived to be uninitiated rather than curious. Leaders and supervisors will need to resolve the issue by influencing a safe climate for professional interactions and asking of questions at the workplace.

### **5.2 Recommendations for interns**

Interns should be better prepared mentally and psychologically for their learning journey into professional practice. The step from classroom to real-life clinical

practice is a huge transformative one, and demands commitment and hard work. Guidance, drawn from discussion with Focus Group participants and my reading of the literature, on what makes a good intern would position them well as they embark on an exponential learning trajectory.

#### 5.2.1 Prepare interns for internship training

Internship is the prelude to independent professional practice. This transitional year is a crucial one as physiotherapy interns learn the ropes from clinical supervisors by discussing and strengthening their clinical reasoning, selecting and applying appropriate physical therapy skills and practising the techniques on real patients. Additionally, there would be dynamic interactions and engagement with patients, caregivers, physiotherapist colleagues and other healthcare professionals in the delivery of patient care. Black et al. (2010) suggested that much of the learning and change that interns experienced in their first year was directed inward as they grow in self-confidence in communication and relational skills, clinical problem solving and decision making abilities. A segment on 'preparing for internship' should be incorporated in the General Orientation program for interns (refer to # 5.1.2) to help them plan how to make best use of this supervised 'apprentice' period. This was similarly noted in Maringer and Jensen (2014) where therapist-supervisors proposed clearer definitions for trainees to understand how internship works.

#### 5.2.2 Incorporate guidance note on attributes of a good intern in the starter kit for interns

The clinical supervisors emphasised the need for interns to be proactive in attitude, and to take an interest in their learning by being better prepared for their discussions. Additional pointers are listed in # 5.1.2 which can be incorporated as a guidance note for interns. Adopting positive attitudes towards learning would aid the trainee to progress through internship successfully.

### **5.3 Recommendations for supervisors**

Clinical supervisors require training and guidance to help them to be effective educators, assessors and mentors, all rolled in one. Supervision can be a complicated and demanding task, yet many supervisors assume the roles without preparation or training (Fitzpatrick, Smith and Wilding, 2012). As this is the case for our current situation, the following recommendations will equip our supervisors well for their roles and responsibilities:

- 5.3.1 Launch the Train-the-trainers program to train clinical supervisors in
  - Educational pedagogies
  - Supervision of interns in the presence of real patients
- 5.3.2 Develop and disseminate a 'Guidance note on attributes of good clinical supervisor'
- 5.3.3 Develop and disseminate a 'Guidance note on preparing for clinical supervision – purpose and process'
- 5.3.4 Initiate mentoring program for clinical supervisors

#### **5.3.1 Launch the Train-the-trainers program for all clinical supervisors (current and new)**

Clinical supervisors require training to be effective in their role as educators so as to achieve the desired outcome of internship. This is supported by the findings of Ohman, Hagg and Dahlgren, (2005); Dawson, Phillips and Leggat (2012); Rogers, Lautar and Dunn (2010); and Hall et al. (2016). There are multiple functions they perform; to coach, guide, assess, feedback, and so forth. They must thoroughly understand the process of training in cognitive and complex motor skills in clinical settings in order to facilitate theory-to-practice training and reinforce learning; this is in concurrence with Morgan et al. (2006) and Tolsgaard et al. (2013). Reference may also be taken from the UK National Health Service which had recently provided guidance to preceptors in supporting newly registered health practitioners in developing their confidence as autonomous professionals (Maringer and Jensen, 2014). The train-the-trainers program must clearly state what clinical supervision is about; the roles and responsibilities of supervisors; the professional, ethical



principles and obligations to uphold; and the desired characteristics and attitudes of supervisors to embrace. The training should equip clinical supervisors with needed skills to coach in different practice settings. A greater understanding of the preceptor role and supervision expectations would help clinical supervisors gain confidence in their role and the supervisory process (Hall et al., 2016).

### *Train clinical supervisors in educational pedagogies*

The program should provide training in educational pedagogies and approaches to supervisory process and activities among other subject contents. Similar to interns' learning trajectory, training of clinical supervisors should include theory, practice, coaching assessments and feedback from instructors. These will support the supervisors' skills training and development as educators so as to achieve greater effectiveness in the discharge of their supervisory roles and responsibilities and best training experiences and outcomes for interns.

Concurrence is observed with the findings of Maringer and Jensen (2014) on the need for preceptors or clinical supervisors to be adequately trained for their role and responsibilities for effectiveness. They noted that identifying the trainees' learning style and adjusting teaching styles accordingly, and guidance on the challenges of giving and receiving negative feedback were beneficial in easing the student-practitioner transition. Manek (2004) proposed that educational supervisors need to develop coaching competencies in operating across the range of learning styles; from directive (telling and instructing) to non-directive (self-learning) to have a positive impact in supporting foundation doctors.

The ability to reason through the complexities of patient situations and the subtle nuances of individual patient care situations is a measure of student competence (McNelis et al., 2014). Clinical supervisors should be trained to skilfully facilitate higher order thinking skills to promote deep learning and sound reasoning and

decision making (Jessee and Tanner, 2016). In addition, critical thinking skills towards contemporary evidence-based practice should be promoted (Ervin, 2005).

*Engage and train clinical supervisors on the supervisory approach in the presence of real patients*

Supervision of interns in the presence of real patients is ‘training in real-life action’ and needs to be conducted sensitively and professionally. In this clinical supervision trajectory, the supervisor continually seeks to coach, guide, assess intern’s knowledge and skills, give feedback and monitor intern’s development in tandem with decision making and clinical intervention on the patient. At times, supervisor may need to correct the intern. However, it is important to note that the supervisor’s approach in action and words in this supervisory process must not shake patient’s confidence in the treatment provided nor the care provider (in this case the intern). It is vital to preserve the therapeutic relationships of the novice practitioner and their patients. Actions that would embarrass the intern or make patients lose confidence in the intern’s capabilities are unacceptable behaviour. Undermining or belittling another professional colleague’s abilities in front of patients (clients) is clearly unprofessional and disrespectful.

Current and recent interns had highlighted that supervisory experiences in the presence of their patients were very stressful and at times intimidating. One supervisor opined that the supervisory sessions tended to be top-down and authoritative in approach; this might affect the intern’s confidence and performance. The bad experiences shared by interns included those when negative feedback was conducted tactlessly in front of patients, destroying patient’s confidence in the intern’s abilities and skills. This was similarly identified by Maringer and Jensen (2014) that guidance on giving negative feedback was needful to address deficits in the supervisory process.

Salam et al. (2011) and Ramani and Orlander (2013) highlighted that learners have opportunities to use all of their senses to learn the humanistic aspects of clinical practice when teaching is conducted in the presence of patients or at the bedside. The skilful teacher knows how to involve patients and learners in the educational process by ensuring a comfortable environment for all participants. Adopting the right approach will promote learner acquisition of skills in observation, communication, examination and professionalism. Teaching at the bedside or in the presence of patients is important not only in providing active learning in real context but also presents an opportunity for the modelling of professional values and behaviours of the experienced clinician (Ramani and Orlander, 2013).

In addressing this crucial issue, engagement with clinical supervisors coupled with skills equipping would be needed. A refresher workshop with role play on suitable approaches to conduct intern supervision in the presence of patients could be planned for current clinical supervisors. The workshop should be made compulsory for all new supervisors.

### 5.3.2 Develop and disseminate a 'Guidance note on attributes of a good clinical supervisor'

Supervisors need to have greater awareness of the impact their professional attitudes and behaviour have on interns as they train and transit into professional physiotherapists of the future. This is consistent with the research findings of Mettiainen and Vahamaa (2013) and Bruijn, Busari and Wolf (2006) that supervisors' characteristics and attitudes toward learning have a role to play in training effectiveness. Recker-Hughes et al. (2014) proposed the essential characteristics of an effective clinical instructor to include interpersonal skills, instructional skills, evaluation skills and professional behaviours.

Current and recent interns had provided rich accounts and descriptions of the types of supervisors they were happy with or wished to have. A list of attributes and

attitudes that learners (interns) look for in their teachers (clinical supervisors) may be developed to provide guidance to current and new supervisors. The following inputs (not exhaustive) contributed by Focus Groups could be added;

- Do not be judgmental and criticise your trainee; instead critique by offering useful feedback that would help them to improve
- Encourage questions as they promote reflection and learning
- Be supportive and nurturing, not intimidating
- Be humble; 'no one person knows everything, learning is lifelong for all'
- Be respected, earn it
- Inspire / Motivate interns in their learning journey (taking a holistic and lifelong view of learning)
- Be sincere and build trust in the relationship with interns

The focus of internship training should be on the student's learning experiences. Ernstzen, Bitzer and Grimmer-Somers (2009, p.c103) proposed that the teacher's role is to create powerful learning environments for the student in the clinical context of patient care. Cole and Wessel (2008) found that physiotherapy students value clinical educators who facilitate their learning experiences by confirming their learning (via feedback); challenging them (via questioning, discussion and reflection); respecting and valuing their input; and modelling professional behaviour.

### 5.3.3 Develop and disseminate a 'Guidance note on preparing for clinical supervision – purpose and process'

Clinical supervision is used in healthcare professions "for different purposes at different stages of a career" (Hall and Cox, 2009, p.289); embedded in practice, it can enhance the development of confident practitioners. Similar to the findings of Sellars (2004), Hall and Cox (2009, p.288) suggested that "junior physiotherapists at the beginning of their career often require the supervisor to be more directive and authoritarian" as they gain workplace experience and develop professionally.

The purpose of clinical supervision and the processes involved need to be articulated clearly as some interns appeared negative towards supervision and felt that as they have graduated they should be given autonomy and not be subjected to supervision. In addition, some interns experienced anxiety and intimidation from supervisors who were not tolerant of mistakes. Clarity of purpose, process and outcome of supervision will reduce tension and misunderstanding for those who associated clinical supervision with line management and appraisal. Supervisory relationships associated with hierarchical line management may lead supervisees to become defensive about their practice and be unable to ask for help as they want to give the impression of being competent (Sweeney et al, 2001 in Hall and Cox, 2009). This observation by Hall and Cox (2009) found that clinical supervision was most effective for physiotherapists when they were “clear about its purpose and who were able to make the link between clinical supervision, continuing professional development and reflective practice”. Morley, Rugg and Drew (2007) emphasised that supervisors need a good understanding of the preceptorship process in order to maximise benefits and support to newly qualified occupational therapists in their personal and professional growth. Redpath et al. (2015) and Sellars (2004) proposed that supervision of physiotherapists should be individualised and needs based, and a structured process is necessary to assess and respond to supervisee’s learning needs and goals. Black et al (2010) suggested that clinical supervisors have an explicit role in guiding professional formation and socialization of the novice practitioner as they struggle with building self-confidence, communicating with difficult patients, feelings of stress and insecurity during this transitional year. Salam et al (2011) described the teacher in a clinical environment to have a complex task as an information provider, a role model, a facilitator, an assessor, a curriculum planner and resource material creator.

Faugier (1998 cited in Maringer and Jensen, 2014) identified two key roles of the supervisor: in facilitating the supervisee’s educational and personal growth and providing support in their developing clinical autonomy. The author further suggested essential elements in the supervisory relationship in providing the support to include ‘generosity of time’, sincere and non-judgmental ‘trust’, offering guidance rather than criticising, being ‘sensitive’ and ‘thoughtful’.

#### 5.3.4 Initiate mentoring program for clinical supervisors

Clinical supervisors as educators require mentors themselves to guide them and support them in their journey. This was raised by supervisors in the Focus Groups. The mentoring program may be initiated by appointing experienced supervisors who have good track records as clinician educators to be mentors for less experienced supervisors. For a good start, the mentors should attend a course on mentorship so that they can fully appreciate the roles and functions of mentors to be proficient.

### **5.4 Recommendations for capacity and capability development**

Capacity and capability development is proposed to ensure a ready pool of trained clinical supervisors that will groom the next generation of physiotherapists. This recommendation has implications for the Education program director and senior organizational leaders:

5.4.1 Increase the pool of trained clinical supervisors

5.4.2 Develop criteria for selection of clinical supervisors

#### 5.4.1 Increase the pool of trained clinical supervisors

The number of clinical supervisors needed to support the training of interns for current and future years should be reviewed and projected. Student intake in Physiotherapy has been increasing in recent years and our hospital has been receiving training requests throughout the year. This trend (increasing student numbers) is not likely to change for the next 5 to 10 years. Currently, interns are already facing difficulties with supervisor availability and accessibility for numerous reasons including too many interns to coach, and too many other commitments. There is inadequate and uneven spread of clinical supervisors to support interns in an efficient and effective manner. It is, therefore, expeditious to increase the pool of

physiotherapists with trained skills in clinical supervision to meet current and future needs.

#### **5.4.2 Develop criteria for selection of clinical supervisors**

Focus Groups perceived that clinical supervisors were tasked with the role of educators based on their seniority or expertise, and some did not show a passion for teaching. They felt that this attribute is important and have an impact on interns' learning experiences and overall training effectiveness. Snowdon, Millard and Taylor (2015, p.195) found that having experienced clinicians as supervisors is not sufficient to ensure effective clinical supervision. It was felt important that a preceptor must have the desire to serve in that capacity and to give back to the profession (Taylor et al., 2010). Developing criteria and a process for the selection of suitable clinicians to be clinical supervisors would be advantageous. Potential and current supervisors who have the attributes, attitudes, motivation, and mentorship to nurture future generations is a powerful force; they play a strategic role for the progress of the profession and professional practice. This augurs with Burns et al. (2006) that preceptors are needed to prepare the next generation of clinicians; the best and brightest clinicians need to be involved with education of future peers.

### **5.5 My observations of participants' attitudes towards change**

The objective of my conducting this research was to go beyond the findings, to be the change agent to inspire and influence my colleagues to take ownership of the issues and improvements needed to improve our internship program. The readiness of staff in terms of attitudes and behaviour towards change is salient for successful change execution.

My observations of the intern-participants (current and recent) were that they were very happy with the Focus Group conversations that allowed for their 'voices' to be heard. They had expressed that they were unaware of the 'best' avenues for

feedback of internship related issues. They were pleased that that their inputs on improvement strategies were sought too. They were uninhibited in sharing the challenges that they faced and held the belief that issues would be looked into and addressed after this research so that training of interns may be optimised. The supervisors, however, were more guarded in their responses during the Focus Group discussion. They seemed self-absorbed, focusing on themselves, their roles and responsibilities, and self-efficacy. Perhaps there is anxiety on their side of how others perceived them in terms of teaching competence. Although not appearing as excited as the interns, they appeared to recognise that there is a need for their own training in pedagogical skills to be better equipped as clinical supervisors. I sensed that they are prepared for some change but also felt that a morale booster in terms of giving them the due recognition as teachers might be fitting and timely now.

#### Implications for hospital and physiotherapy leadership

Having generated these recommendations for improvement of current internship and assessed the readiness of interns and supervisors for change, the next phase of the action learning process is to engage with physiotherapy leaders to exchange, learn and seek their commitment to put the ideas or strategies into practice. The next chapter will describe the discussion with these key leaders on implementing the recommended change actions. It is important to physiotherapy and hospital leadership that our internship program is reviewed regularly to assure its efficacy and effectiveness in producing future generations of competent physiotherapists as they enter practice.



## **Chapter 6**

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### **DISCUSSION with INFLUENTIAL LEADERS – extending consensus for change**

## **Discussion with influential leaders**

### **- extending consensus for change**

This chapter narrates my discussion with the key leaders of Physiotherapy Department on the research findings, the improvement strategies and the plan for action. A critical evaluation of the comments and planned action by them in response to the recommended changes to improve current internship is provided.

Progressing towards implementing change after diagnosis of the organizational issue and prescription formulation is a crucial step for problem solving and resolution. Senior physiotherapy leaders are the relevant and crucial resource to engage with as they are the influential people with vested interest in the issue and the authority and leadership to effect the change for better outcomes. Inviting them to participate in evaluating the analysed data was beneficial for reviewing the findings, seeking explanations for the findings, and gathering their viewpoints and insights on the issues being studied. Access to the empirical data was truly meaningful and useful for the leaders as well as such detailed information had never been available before.

The purpose of taking the conversations with these senior leaders; the Physiotherapy Head of Department, the Education director or Lead and Deputy Lead (Inpatient) was also to enthuse and build coalition for action. My research findings, recommendations and ideas were presented for discussion, and responses from these leaders were sought including their comments on next steps. The 3-hour conversation was characterised by a thorough discussion of the research. Members felt that the research was timely as no one has conducted an objective review of supervised practice in physiotherapy to-date. The leaders were open and shared candidly.

## **6.1 Key comments from Physiotherapy leaders on survey findings**

The physiotherapy leaders expressed their surprise at the low mean scores from clinical supervisors for the survey questions. The Education director commented that she was, however, not surprised by the low mean scores (below midpoint '5') accorded by supervisors for interns' attitude towards learning and their knowledge (theory) base. She indicated that the current interns did not perform well when tested on their basic knowledge and competence prior to their clinical rotations. She observed too that interns assumed that the responsibility falls on clinical supervisors to train, equip and support them. She opined that the mental models of interns can be worrying if they fail to recognise that it is their responsibility to read up, refresh their lessons learnt in undergraduate class and come prepared for their clinical work. The Head of department pondered if clinical supervisors who are very experienced or practising at expert level have higher expectations than those supervisors with less experience, to explain for the overall lower mean scores by supervisors. The Education director suggested that there is "good evidence" (*in her own words*) that the near-peer supervisory structure has less issue with expectations of the trainee.

Concerning workload pressure felt by interns, the Head of department opined that there would be major operational challenges if interns were given less caseload as it would affect patient waiting time. The workload ramp-up as practised in Outpatients may be considered in the Inpatients core discipline provided other physiotherapists are prepared to take on additional work. The meeting agreed there are no easy solutions to this as currently the training positions are treated as staff positions rather than supernumerary posts. This manpower problem is more likely to persist; nevertheless, some re-calibration of interns' workload might ameliorate the issue and improve the learning opportunities and experiences of these novice practitioners.

Concerning staffing level of clinical supervisors, the physiotherapy leaders offered their explanation as to why some supervisor: intern ratios were 1:1, 1:3 and an extreme case of 1:20. AHPC guidelines stipulate 1 supervisor to 1 intern for Level 1 supervision (1<sup>st</sup> six months) and 1 supervisor to maximum 3 interns for Level 2

supervision (next 6 months). The exceptional case involved a full-time supervisor without clinical load. The case was raised as food for thought, whether 'full-time' supervisor is a desirable model. The key consideration was the progressive loss in currency of clinical knowledge and skills when the 'full-time' supervisor is no longer in active clinical practice.

The mean scores for effectiveness of current internship program were unremarkable; rated mediocre by interns, clinical supervisors and other physiotherapists (6.14, 5.55 and 6.45). The Education director suggested that there is much to be done based on the results presented; she commented that program effectiveness is multifactorial and complex and that she would need time to address the multiple factors and issues.

The Education Deputy Lead shared an interesting personal observation of some clinical supervisors who held the notion that as the trainees are salaried (to work) that they do not see why supervisors should invest so much energy and effort to train them. These supervisors are, therefore, not fully supportive of the internship program. The Head of Department explained further that these supervisors felt that the new staffs are not students; they have graduated from the physiotherapy course and they are paid to work as physiotherapists. She suggested that a balance need to be struck between work and training for interns.

On the topic of training effectiveness, the Head of department felt any evaluation should consider input versus output; the extent of effort put into achieving the outcomes which is basically to get them through the AHPC professional registration. As opinions differ on the need for and goals of internship depending on whose perspectives is taken (interns, supervisors, employers, regulator, etc.), the physiotherapy leaders agreed that there is lacking a clear articulation of the goals of internship as well as the selection of clinical supervisors. They concurred in unison that selection of supervisors who have the passion for teaching is very important as they impart values, attitudes and role model professional behaviours.

The Head of Department shared her observation of the generally lower rating scores from mid-tier supervisors with average 3-5 years' work experience (late 20s, early 30s) to mirror the results from the hospital's Employee Engagement Survey where this staff group was noted to be less satisfied compared to other staffs. The conclusions drawn from the employee survey suggested this staff group generally felt a lot of responsibilities are put on them but were not appreciated / given recognition by their colleagues; juniors and seniors.

## **6.2 Key comments from Physiotherapy leaders on focus groups' data**

Members were asked for their immediate response after reading the focus group findings; they suggested that interns and supervisors were totally unclear about internship expectations. The Education director attributed this to the new AHPC (Allied Health Professions Council) legislative requirements for supervised practice of fresh graduates. Prior to legislation, students who graduated from the physiotherapy course would enter into professional practice as physiotherapists immediately. This has become the old school of thought as the legislation now required graduates to undergo 1-year supervised practice and pass the competency examinations before they are qualified as registered physiotherapists. She shared that the sentiments on the ground are mixed. Some physiotherapists expressed the view that the legislation appeared to imply that new graduates are not good enough for autonomous practice and secondly, supervisors now have obligations to train them. Some others felt new graduates are hired with a salary and should be performing independent work as they did previously. On another hand, new graduates now expect training sites and supervisors to be obligated based on AHPC requirements to provide them the necessary training to get them to the next level (or full membership). On this note, she wondered what mindset new graduates come in with; a student or a practitioner, as they embark into real-world practice.

The Education director expressed her concerns about the mindset of interns with regards to the workload they will manage. She is worried about the huge gap in interns' expectations; they were managing half the caseload of patients during student days' clinical placements, but the situation is changed now as practitioners. She felt strongly that interns should manage a full workload as they are paid the salary of a full time staff (on top of which seniors have to provide them with training too). She reasoned that if they were to carry a lower caseload (due to competing demands of work and training), the service roster will be severely affected. The Head of Department suggested that the balance (and challenge) is in incorporating training into their work.

On the subject of interns' attitudes, the Deputy lead commented that the worry is how interns behave and the expectations they hold about their role as novices; she felt that they still act like undergraduate students but expect to be recognised as independent practitioners and not be subjected to the supervised framework.

With regards to interns' preferred training style and the opinions of current and recent interns on the misfits in learning and teaching styles, the Education director was very emphatic that a learner needs to adjust and behave according to the context even if they have preferred learning styles. She suggested that there is no literature support for trainers to fit their teaching styles with learning styles of trainees; basically, interns need to develop a repertoire of learning styles to maximise their training.

Members acknowledged that coaching practice or supervision in the presence of patient needs improvement. They shared that they had witnessed occasions when the supervisors seemed harsh on the interns. The Education director remarked that our clinical supervisors are great coaches albeit stern and firm as they are generally serious and no-nonsense about their tasks. This perhaps explains for why interns felt tense and 'not safe to speak' when they are with their supervisors. She added that

she would consider setting up standards on bedside practice (equivalent to supervision in the presence of patients).

All three leaders agreed that the clinical supervisors need to be actively engaged on the issues of clinical supervision. They supported the idea of running a course / workshop for supervisors to share ground rules and tips on the approaches to teaching, different learning styles of learners, and how to be effective in coaching. Similarly, a session with interns during orientation will be useful to share with them on the need to adjust their mindset and expectations about learning.

I enquired about coach availability; whether this is an issue in their opinion. The Education director explained that some supervisors are flexible enough to make adjustments in their schedules if it is not too disruptive. However, the leaders emphasised that there are other alternative methods of learning e.g. case studies, workshops which are officially accredited by AHPC as activities claimable for supervisory hours. In view of that, it was not necessary for all teaching to be conducted at bedside. I offered my personal thoughts: that the availability and accessibility of clinical supervisor lies with their commitment, approachability and sincerity about nurturing interns through reaching out to them as well.

Concerning 'protected time', the leaders are of the opinion that time spent seeing patients with supervisory oversight is considered protected. Based on AHPC stipulated supervisory hours, as long as interns and clinical supervisors logged in the required contact hours with each other, supervision was deemed to have been achieved. The Education director concluded that interns were therefore accorded 'protected time', similar to clinical supervisors. This is contrary to the observations of interns and the community of physiotherapists. The Head of department suggested that dedicated time for training is given but how it is being utilised is important; that, perhaps, there were a lot of disruptions. Gathering from this discussion, I felt that there is a lot of confusion and misunderstandings over what protected time is. I emphasised that there is vital need to clearly define protected time and what it

translates into in real terms. The expectations of supervision and supervised practice needed to be articulated as well. I reiterated that teaching the next generation is an honour and privilege and teachers must be inspired and recognised for the critical role they play. Very importantly, interns must also not be treated as 'hired hands' because they receive a salary. This mindset would have serious impact on interns' morale, supervisors' attitudes toward teaching, and training outcomes. There was unanimous agreement from all.

The Education director informed that she conducts a 1 to 1 session with new clinical supervisors on bedside coaching (the department's coaching guidelines was emailed to me after the meeting). There is no other training that clinical supervisors are put through. Formal training on education has so far been invested on the few who have indicated a clear desire to embark on the education track of their career pathway.

In response to my question whether there is an ideal supervisor-intern ratio, the leaders responded that AHPC has mandated the tiered supervision structure. As this was only recently implemented, it has not been evaluated yet. The Education director indicated that notwithstanding the mandated structure a good supervisor-coach may be able to take on more interns than the stipulated numbers.

I enquired if there is formal selection of clinical supervisors and if interested staffs could apply to be one. The reason for the question was the expressed Interest by some physiotherapists in the Focus Group. The Head of department responded that supervisors were assigned, but they were allowed to decline if they do not wish to accept the task. Members agreed to my proposal to review this subject on selection; to consider developing selection criteria, assessing clinical supervisors, and so forth.

Comments were sought from Physiotherapy leaders on the ranking of literature themes (or factors) in influencing training effectiveness by Focus Group participants. The leaders were surprised that the clinical supervisors, recent interns and the



community of physiotherapists (48.7%, 47.2%, and 32.4%) had ranked intern-supervisor relationship as most important in influencing the effectiveness of clinical training of physiotherapists. An explanation was offered; relationship is a composite of factors, but a good relationship would definitely reflect a comfortable one where intern can ask questions, and feel supported in their learning.

### **6.3 Discussion on my recommendations**

My recommendations (organised according to implications on stakeholder groups) were presented after discussion of the findings. They comprise elements for restructuring of internship program, intern-related aspects, supervisor-related aspects and elements for capacity and capability development. On the whole, the physiotherapy leaders were in agreement with most of the suggestions. They responded that some suggestions were already implemented and some others would be reviewed for implementation at the next intern rotation.

At the close of the session, I had proposed that my tabled recommendations (cross-referenced to Sections 5.1, 5.2, 5.3 and 5.4 in Chapter 5) are emailed to them so that they can give further thought and discuss among themselves before reverting on their responses. They were requested to indicate whether the recommendations are implementable, the timeframe for implementation and any other remarks. They were invited to add further suggestions; if any, that might enhance current internship program. A collective response (see Table 6) was received 10 days later including a department document on 'Clinical coaching program guidelines'.

Table 6: Response of Physiotherapy leaders to my recommendations

Recommendation	Implement-able (Y/N)	Implementation Timeframe (mm/yy)	Remarks
<b>Recommendations for restructuring of internship program</b> (implications for Education program director, Education Leads, clinical supervisors, interns)			
5.1.1  Compulsory rotation to inpatient and outpatient core disciplines	No	NA	All entry-level physiotherapists have to go through 3 core rotations – musculoskeletal, cardiopulmonary and neurorehabilitation. As each rotation is minimum 6 months, 3 core rotations will exceed the 1-year internship
5.1.2  Refresher or induction workshops at the commencement of clinical rotation	Yes	Ongoing efforts to address issue	Induction workshops are planned within the first 2 weeks of rotation. Staffs are also directed to pre-reading materials on Blackboard to prepare for the rotation.
5.1.3  New routines for coaching activity (before, during, after)	Yes	Ongoing efforts to address issue	Coaching framework/guidelines will be re-emphasized to the supervisors and interns.  Interns will also be encouraged to read/self-reflect and get back to the coach on issues discussed.
5.1.4  Incorporate a segment on 'preparing for your internship' in the General Orientation program for interns	Yes	Next rotation	Approach to learning and attitudes of interns will be highlighted in the orientation.  Suggestions on workload management will also be incorporated to help new interns.
5.1.5  Design training assessment in a format that tracks the developmental growth of intern at regular intervals	Yes	Ongoing efforts to address issue	Regular Mini Clinical Evaluation Exercises (CEXs) are done as part of their formative assessment. Summative assessments in the form of clinical audits are also conducted.

Table 6: Response of Physiotherapy leaders to my recommendations (continued)

Recommendation	Implement-able (Y/N)	Implementation Timeframe (mm/yy)	Remarks
<b>Recommendations for restructuring of internship program</b> (implications for Education program director, Education Leads, clinical supervisors, interns)			
5.1.6  Accord interns and clinical supervisors 'protected time' per week for educational purposes	Yes	Next rotation	
5.1.7  Acceptable workload for interns	Yes	Next rotation	To align Inpatients and Outpatients ramp-up of workload for interns during the 1 <sup>st</sup> month of work.
5.1.8  Solicit regular feedback on teaching and learning	Yes	Ongoing efforts to address issue	Feedback for workshop trainers and supervisors are carried out.  Regular forum with supervisors and interns can be conducted 6 monthly to gather feedback
5.1.9  Promote safe climate to ask questions and grow	Yes	Immediate	Not just limited to Education, but all areas, in line with EES (employee engagement survey) improvement initiatives  Will encourage open communication at rotation feedback sessions, team meetings
<b>Recommendations for interns</b>			
5.2.1  Incorporate 'preparing for internship' in General Orientation program	Yes	Next rotation	As per 5.1.4
5.2.2  Incorporate guidance note on attributes of a good intern in the starter kit	Yes	Next rotation	Encourage attributes of good interns and to build rapport with supervisors.

Table 6: Response of Physiotherapy leaders to my recommendations (continued)

Recommendation	Implement-able (Y/N)	Implementation Timeframe (mm/yy)	Remarks
<b>Recommendations for supervisors</b>			
5.3.1 Launch the Train-the-trainers program – <ul style="list-style-type: none"> <li>○ Educational pedagogies</li> <li>○ Supervision of interns in the presence of real patients</li> </ul>	Yes	Ongoing efforts to address issue	Besides MOH AHPC Supervisor workshop, the following are in place: <ul style="list-style-type: none"> <li>- Orientation for new supervisors</li> <li>- Provide pedagogical resources for new supervisors (eg learner styles, providing effective feedback etc)</li> <li>- Offer support/feedback to new supervisors via formal or informal means.</li> </ul>
5.3.2 Develop and disseminate a 'Guidance note on attributes of good clinical supervisor'	Yes	Next rotation	
5.3.3 Develop and disseminate a 'Guidance note on preparing for clinical supervision – purpose and process'	Yes	Ongoing efforts to address issue	Coaching guidelines available
5.3.4 Initiate mentoring program for clinical supervisors	Yes	Next rotation	Buddy system for new supervisors to pair with more experienced supervisors.

Table 6: Response of Physiotherapy leaders to my recommendations (continued)

<b>Recommendation</b>	<b>Implement-able (Y/N)</b>	<b>Implementation Timeframe (mm/yy)</b>	<b>Remarks</b>
<b>Recommendations for capacity and capability development</b> (implications for Education program directors, senior leaders)			
5.4.1  Increase pool of trained clinical supervisors	No	NA	We have enough supervisors to meet supervisor: intern ratio stipulated by AHPC.
5.4.2  Develop criteria for selection of clinical supervisors	Yes	Ongoing efforts to address issue	AHPC Supervisor criteria: <ul style="list-style-type: none"> <li>- 3 years working experience</li> </ul> Department's criteria: <ul style="list-style-type: none"> <li>- Prior experience with NYP students</li> <li>- Willing to teach/share knowledge</li> <li>- Demonstrate clinical competence</li> </ul>

#### **6.4 Critical evaluation of comments and planned action by Physiotherapy leaders**

The discussion with the Physiotherapy leaders offered me perspectives from another lens; that of leaders who are held responsible and accountable for the success of the program. Their responses including explanations for some interesting findings reflected their own sense-making of the research data and findings; which were based on their assumptions, experiences, and operational needs intertwined with their personal feelings. As I critically reflect on this, I realise the relevance of balancing knowledge derived from research with the experiences and feelings of influential others, and how I would negotiate or influence the next steps for change. Overall, the responses to my recommendations were affirmative; either there were ongoing efforts or the Education team plans to implement them soon by the next clinical rotation. Two recommendations (items 5.1.1 and 5.4.1) were contentious, which will be discussed in further details below.

### *(1) Recommendations for restructuring of internship program*

I have recommended compulsory rotation to inpatient and outpatient core disciplines within the 1-year supervised training program before the novice becomes a fully registered member and be capable of treating any general case. The Physiotherapy leaders felt that a minimum 6 months rotation is needed for each of the 3 core disciplines (Musculoskeletal, Cardiopulmonary and Neuro-rehabilitation). They highlighted that the regulatory authority, AHPC, does not require nor specify the specific clinical areas to be covered by the interns as nationwide the training sites each have their own clinical disciplines and settings. They suggested that training duration of at least 6 months is needed to build up basic competencies in a particular area to practice safely and be fairly efficient. I felt that the current scheme of clinical rotations is tailored specific to our own hospital needs. Interns are currently employed and trained as our salaried staff. We are therefore able to 'lengthen' the learning period of our interns. I would argue that a national view should be taken on the development of entry-level physiotherapists, ensuring that they are 'work ready' for general cases by covering core areas within the stipulated 1-year timeframe of supervised practice. This has been the local practice for doctors, dentists and pharmacists. The legislature for physiotherapists is newly enacted and our physiotherapy leaders may not have fully grasped national considerations over local needs. Some guidance later on may be appropriate; basically for physiotherapy leaders to re-think what is essential in terms of core clinical disciplines, competencies and principles for interns to be trained in, to attain work readiness for independent practice.

The physiotherapy leaders indicated that refresher or induction workshops were conducted within the first 2 weeks of the core rotations since 3 years ago (Oct 2012). In view of the feedback received at Focus Groups; review and enhancements of the refresher course may be useful and timely.

The physiotherapy department had produced a document 'Clinical coaching program guidelines' for supervisors and interns. I have reviewed the document and noted that the guidelines were focused on operational aspects. I believe my recommendations on specific routines of the coaching activity (before, during and after) will add value to their document. The coaching routines will be best taught and learnt through role play for the supervisors.

In response to designing training assessment in a format that tracks the developmental growth of intern at regular intervals, the physiotherapy leaders have responded that formative and summative assessments are conducted on a regular basis. Submissions to AHPC at regulated intervals; 1<sup>st</sup>, 5<sup>th</sup> and 11<sup>th</sup> month, also provided the feedback on developmental growth. The paperwork and submissions to AHPC appear to be in order; nevertheless, the true intent to ensure longitudinal monitoring of competency development at different levels of practice could be reinforced. Interns should gain skills experience and professional confidence in managing patients of increasing complexity as they progress through the internship. Whilst feedback on the training program is obtained in the usual way via forms, the leaders now plan to include a forum with supervisors and interns once a year to gather 'rich' data from face-to-face interactions.

The physiotherapy department supported the proposals to (i) accord interns 'protected time' for educational activities, and (ii) adopt the 'ramp up of workload' operative during the 1<sup>st</sup> month of work in order to ease interns into practice with an initial manageable workload. The plan for implementation is in the next clinical rotation for interns.

Promoting a safe climate to ask questions was undoubtedly an important workplace culture. The leadership team indicated immediate implementation of this improvement initiative. They planned to encourage more open communications at team meetings and feedback sessions.

### *(2) Recommendations for interns*

The physiotherapy leaders accepted the recommendations to better prepare interns ahead of their new and demanding learning journey as novice practitioners. They will incorporate a segment on 'Preparing for internship' in the General Orientation as well as provide a 'Guidance note on attributes of a good intern' to get them on a right start. Implementation will be at the next clinical rotation.

### *(3) Recommendations for supervisors*

The physiotherapy leaders had responded that new clinical supervisors receive orientation, are provided pedagogical resources and given support whenever needed. From a few years ago (April 2013) when the AHPC Act was initiated, supervisors were also required to attend the Health Ministry's Supervisor workshop. It was clarified that the workshop was focused on purely administrative requirements; form filling and document submissions. The leaders opined that while there is no structured training for supervisors, they are expected to be self-directed in their learning. As a leader, I have strong opinions about equipping staffs with the essential tools to perform their roles best. Even with best intentions and great passion, clinical teachers can only be effective if they are equipped with the tools and skills to educate others. I plan to discuss further with the Education leaders to organise a structured Train-the-trainers program incorporating essential content such as educational pedagogies and bedside teaching (supervision in the presence of patients).

The coaching guidelines developed by physiotherapy department for interns and supervisors are not sufficiently detailed on how the clinical supervisor can prepare for their role and the supervisory process. I would encourage the Education leaders to revise their document to include specific guidance for supervisors as distilled from empirical findings and literature. A Guidance document on 'Preparing for clinical supervision' could be disseminated to all supervisors.



The leaders concurred on the proposals to develop and disseminate a 'Guidance note on attributes of a good clinical supervisor' and to initiate a mentoring program for clinical supervisors through the pairing of new and more experienced supervisors. The timeframe for implementation is targeted at the next clinical rotation.

#### *(4) Recommendations for capacity and capability development*

The Physiotherapy leaders indicated that the department has enough supervisors to meet the supervisor: intern ratio stipulated by AHPC. They were not perturbed by the uneven spread of supervisors in clinical teams and felt that cross-team supervision sufficed. I am, however, concerned that the demand for clinical supervisors will exceed supply in future years with the increasing intake of physiotherapy students by the university and polytechnic. In the bigger scheme of things, public hospitals inclusive of ours would be expected to train more physiotherapists for the country. Based on this likelihood, I would persuade my physiotherapy leaders to build capacity and capability by increasing the pool of trained supervisors.

The Education leaders indicated there are criteria for the selection of supervisors although the perception on the ground was otherwise. Their criteria for selection; 3 years' minimum work experience, prior experience with students, willing to teach and demonstrate clinical competence, appeared lacking in rigor. I would encourage enhancements to the criteria and process for selection of clinical supervisors.

### **6.5 Towards implementing action by physiotherapy leaders**

This interaction with senior physiotherapy leaders served a good opportunity for shared understanding of the organizational issue from the empirical data collected and not just the researcher's views. The feedback mechanism of drawing on the tacit knowledge of senior physiotherapy leaders helps ensure internal validity of the

results. This stage of the research process to discuss the perceived need for change with leaders who have the authority to effect change is crucial.

Of the 17 recommendations, 15 were indicated as implementable and targeted to be implemented by the next clinical rotation if not already effected. For the 2 items indicated as not implementable: (i) compulsory rotation to inpatient and outpatient core disciplines (# 5.1.1) and (ii) increase pool of trained clinical supervisors (# 5.4.1), I would revisit them with the physiotherapy leaders at a later time. I would argue that exposure to varied clinical settings during the 1-year internship was vital to adequately prepare interns ready to enter the workforce. In addition, capacity and capability development are important strategies to future-proof clinical education and supervision needs.

As a concluding remark, the engagement with the physiotherapy leaders was of paramount importance as I energised ownership of the issues and extended consensus for change with influential stakeholders in my role as manager-leader and change agent. The co-identification of the issues with stakeholders has led to the recommendations for improvement of our internship program which was mostly accepted. The stakeholders were empowered to advance their agenda for change with an itemised plan and implementation timeframe. An evaluation of the recommended strategies is, however, not in the remit of this research study due to time limitations of the DBA course.

## **Chapter 7**

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### **MY REFLECTIONS**

## **My Reflections**

This chapter narrates my critical reflection of the research journey I undertook as an insider researcher and scholarly practitioner. I have learnt many things during the research process. Inclusive of other knowledge gained throughout the DBA journey, my transformation into a scholarly manager-leader has implications for my future practice.

### **7.1 My role in the research**

As an insider-researcher, my role is a dynamic one to uncover participants' experiences of the different stakeholder groups and what they make out of them. As a non-member of the physiotherapy department, I was able to interact 'freely' with my participants with no-strings-attached and to put on un-tinted lens, to observe, inquire and discuss issues with objectivity.

Throughout the process of the research, I relied on my scholastic capability to draw knowledge and insights from the literature in framing my organisational issue and providing evidence for the arguments in my recommendations. I applied critical reflections as I progress through stages of the research when data was gathered and analysed, transcripts read and re-read, findings written up and conclusions being drawn.

By deploying participatory research, I was able to corroborate and build a shared vision with key stakeholders so as to broker the necessary organizational change going forwards. Coupled with skills of a change agent, I engaged and inspired them

towards making improvements to achieve organizational and personal goals for effectiveness.

## **7.2 Reflections of my research process**

Conducting the research was a major endeavour and rewarding one. I consider it major because I was employing new research methods for the first time, and rewarding as I was able to make contributions to the physiotherapists' community with the study findings and improvement recommendations. As I reflected on my research journey, there are many aspects of the research process that I have learnt and gained; the key ones include:

- i. Better understanding of clinical internship or novice development
- ii. Deploying new research methods learnt
- iii. Managing qualitative data and analysis, and using qualitative language
- iv. Evaluating and integrating literature
- v. Assessing political dimensions and power relations

### **7.2.1 Better understanding of clinical internship or novice development**

The huge amount of literature that I went through has expanded to some extent the breadth and depth of my understanding of clinical internship; a complex, multidimensional subject with associated intricacies. Undoubtedly, clinical supervision is fundamental to safeguarding standards, development of professional competencies and delivery of quality patient care.

In parallel, the participatory research process allowed my direct contact and interaction with interns, supervisors and the community of physiotherapists giving me 1<sup>st</sup> hand view into their lived experiences. I have a better appreciation of the struggles and challenges, joys and hopes of different individuals, and in particular the voices of interns of their clinical learning experiences and developmental journey to independent practice.

### 7.2.2 Deploying new research methods learnt

#### - Participatory research to inform action

I was able to put into practice my learning on action approach to problem solve my organizational problem and reform practice. The aim of my research is to generate practical actionable knowledge that will be useful to the practitioner community. I have achieved the initial phase of the action research process by engaging stakeholders as co-participants and enthusing them to take active steps towards improvements. The action research methodological approach is empirical, dynamic and involves a diagnostic, active-learning, problem-finding and problem-solving process.

#### -Focus Groups

Working on qualitative methods for data collection was a whole new experience for me. Focus Groups taking the form of loosely structured 'steered conversations' were deployed as the exploratory tool to draw in-depth responses to the topics of interest from participants. There were process steps and stages involved in preparing for focus groups, conducting focus groups, and collecting the data. The detailed steps were religiously followed for best outcomes (willing and unthreatened airing of views) and methodological rigor. Transcripts of the focus groups were produced; this was no easy task as 8-hours' worth of discussion from 4 focus groups were painstakingly transcribed verbatim inclusive of non-verbal cues and expressions.

### 7.2.3 Managing qualitative data and analysis, and using qualitative language

#### -Using NVivo

The data collected was rich (in content) and voluminous but analysis appeared cumbersome and daunting. I was getting a little anxious and decided to use the NVivo toolkit to facilitate my management of the qualitative data collected. The challenge, however, was that I have absolutely no knowledge of NVivo software to start with, and how the tool might assist me to analyse the raw data. Learning how to

use the software from a colleague was truly an enriching experience for me, and I am grateful for this colleague's kindness, patience and support. I found the software program useful for storing and organising my data, and in locating text associated with codes or themes. It has enabled me to interrogate the database, have a visual picture of codes and themes and their interrelationships, and build levels of analysis. The program was helpful in facilitating the continual moving around of excerpts of information, reorganising of codes and themes under new categories as the project progresses.

#### -Qualitative data analysis

Analysis of qualitative data was uniquely different from the scientific statistical methods that I am more familiar with. I found myself reading and re-reading the transcripts and attempting to interpret the data in the context of the research questions asked and the experiences of individual participants. I, the researcher, was continually engaged in interpreting the data in the descriptive, the linguistic and conceptual comments (Maringer and Jensen, 2014) made by participants.

#### -Writing the qualitative study

It has been described that there is art in writing qualitative findings; this thesis is my maiden work in writing such a piece guided by the goal to bring in the voices of participants in the study using quotes to provide the specific evidence to support a theme or to convey more complex understandings.

As I progressively write the chapters of the thesis I find myself constantly reflecting on the issues that arose from focus groups; thinking deeper, comparing viewpoints of different stakeholders, analysing and interpreting. I realised that this routine is unique to the qualitative approach wherein the rich data allowed me to ponder deeply into the descriptive, get behind the lenses of others, peer through my own glasses and thus write reflexively.

#### 7.2.4 Evaluating and integrating literature

As part of scholarly research, literature reviews help me the scholarly practitioner to avoid 'reinventing the wheel' and to build on what others have done (Zorn and Campbell, 2006). As I progressed through the study and analysed my data, I revisited literature again to compare what I have found. I discovered factors in the literature that are congruent and others that are different. Literature act as a mirror for me to reflect on my study; to compare notes, to review gaps, to evaluate my findings and determine the contributions it has made.

#### 7.2.5 Assessing political dimensions and power relations

It was important that I consider the dynamics and impact of political and power dimensions that might take place during the research process in my drawing participation, communication and interaction with Focus Group participants, and interpreting the data throughout the study. Positional power or organizational 'authority' may affect or influence how participants respond during the Focus Groups engagement and including the discussion with physiotherapy leaders. At best, there might potentially be subtle forms of control or influence of superior over subordinates. I was, therefore, cognizant of my role as a senior leader in the organization and the potential political issues my seniority might have on different stakeholders participating in the research.

To begin with, as a non-physiotherapist, my role as an insider-researcher was advantageous in averting political influences on the research. I sensed that the focus groups' participants were relaxed and very comfortable with my presence, except for the supervisors' group who took a little time 'warming up' initially before they became participative. The participants; particularly current and recent interns, had expressed that it was a good thing that I was conducting the study as they felt it would be apolitical, neutral, and objective. I deduced that because I am not a staff of the physiotherapy department, participants felt that my position is neutral as I would have no political reason to take sides with any group.



Organising the focus groups as homogeneous groups also took away the concerns of power relations within group discussions; participants were observed to be open, candid and the group dynamics was generally very good and comfortable.

As an insider, I was keenly aware of the presuppositions that I might hold and would regularly stand back and critique on my assumptions as I move through the project. This is to assure my role as an authentic researcher and credible insider. My interaction with the physiotherapy leaders was in the later phase of the research, to present my findings from the survey and focus groups, and my recommendations for improvement of internship. Although there is potential power imbalance on the basis that I am the division director and the direct supervisor of the Head of Physiotherapy Department, this was mitigated by my setting the stage for the discussion meeting. The goal of my research to elucidate factors influencing internship effectiveness was reiterated and the intent for making progressive improvements of our internship program was also highlighted. Overall, the discussion was open, non-threatening and, in fact, very positive as the leaders contributed readily and actively to the explanations and interpretations of the study findings. The fact that 2 of my recommendations were not accepted by the physiotherapy leaders attests to the 'open' non-coercive operating atmosphere between my subordinates and me. By the same token of openness, I hope to engage them later on in these areas of contention.

Throughout the progress of my study, I was regularly presented with the opportunity to reflect on the possible impact of my position on the research. I am most appreciative of my academic supervisor who constantly invited me to reflect on my empirical work, to critique my assumptions, to consider any personal bias or impact my seniority role may have on the data collection and analysis process. I was also encouraged to make notes of my thoughts, feelings and reflections. The journaling process helped in gaining insights into my preconceived notions as a senior leader researching a department reporting to me.

### **7.3 What I have learnt standing back from the research process**

The research experience has heightened my awareness as a researcher in qualitative approach on the importance of reciprocity between the researcher and those researched, with respect to trust and mutuality. The collaborative aspect of the research involves the need for respect of the relationship in the research-to-action continuum.

The action-oriented participatory research process has offered me the opportunity as a researcher to make sense of the participants' attempts to make sense of their lived experiences. As an insider-researcher, my role was to uncover the experiences and perspectives of interns and clinical supervisors in their intertwined relationship and learning experiences within the context of workplace power relations and politics. Being part of the research process, I kept a reflexive stance by maintaining an open mind and suspending any preconceptions as I researched on the issues to maintain objectivity.

I have learnt to manage qualitative data and its analysis and produce robust and well-argued findings and proposals. The research process and experience has helped me gain confidence in using qualitative methods for research and deploying action-oriented approach to problem solve organizational issues.

### **7.4 My contributions**

My role doing insider action research was aimed at generating actionable knowledge. I have contributed empirical material to my physiotherapy colleagues; they are rich in content, relevant and useful for further efforts to improve our internship program. The evidence-based and collaborative research process has generated open dialogue with stakeholders, confidence in the analysed findings and the commitment for change.

Synthesising my research findings and critical reflections with knowledge distilled from literature sources, I have offered my further insights on factors that influence internship effectiveness and some key strategies to enhance the learning experiences and professional development of interns. I hope my findings and insights have made a contribution to actionable practice-based knowledge to both academic and the physiotherapy community.

## **Chapter 8**

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### **CONCLUSION**

## **Conclusion**

This concluding chapter presents a summary of the research, its methodological rigor and the contributions from the study. It provides a discussion of the implications for practice and recommendations for future research.

### **8.1 Summary of the study**

The objective of my study was to make progress towards improving clinical internship for physiotherapists. The research method employed involved exploring the experiences and perceptions of interns, clinical supervisors and the physiotherapists' community on the learning and development of novice physiotherapists in the first year of practice. This transition from student to a professional practitioner known as internship is a critical period and knowing more of the nature of learning and professional development that takes place is important albeit an area felt to be under-investigated (Black et al., 2010). A robust framework to facilitate and support workplace learning and development for the intern is essential to ensure the achievement of competence (in terms of knowledge, skills and thinking) and social and professional enculturation to be ready for entry to professional practice. A clear view and understanding of the influences that support or hinder interns in their continuing professional development is valuable and vital for the outcomes of future generations of physiotherapists.

#### **8.1.1 Research Purpose**

The purpose of my research, therefore, is to gain an understanding of the influences that impact internship (or professional development of the novice) and with the

knowledge and insights gained to make improvements to our current internship program for physiotherapists.

### *8.1.2 Research Questions*

The research questions are: (i) what are the factors that influence (support or hinder) effectiveness of internship training? and (ii) what specific improvement strategies may be implemented to address our current organizational issue?

### *8.1.3 Methodological approach*

Literature was looked at initially to frame the issue on clinical internship. A collaborative process of problematizing the issues and developing solutions with key stakeholders was adopted. This aligns with the tradition of action research where people most likely to be affected by, or involved in implementing changes associated with the issues, are involved in the research process. I have deployed action-oriented participatory research for my methodological approach by involving stakeholders as co-participants and co-analysts of the research process so as to draw commitment from participants to take action for change beyond the research findings.

The research methodology employed a combination of quantitative and qualitative methods to generate good data that would provide full and detailed perspectives of the organizational issue being investigated.

References from literature were drawn that provided outside support for the theoretical model and the proposed improvement strategies (change actions) but actual data in the form of quotes provide explanatory material for how the theory is grounded in the data and change actions being substantiated.

#### **8.1.4 Validation and reliability**

My research is methodologically rigorous. The data sources from multiple and mixed methods deployed in the study establish the credibility and contextual relevance of the research. There is structural corroboration through multiple types or sources of data to shed light on the subject and to support the interpretation, and consensual validation from competent others (Creswell, 2007) – the physiotherapy leaders. The qualitative research is validated through the systematic procedures from design to data collection, management, analysis and presentation. Triangulating among different data sources, writing with detailed and thick description of empirical data provides the trustworthiness for this study.

The study is also credible and robust; as I am the sole interviewer, transcriber and analyser, the effects of multi-researcher variances were mitigated. Two (2) knowledgeable colleagues offered support on the technicalities of SPSS and NVivo software usage; and coupled with guidance and regular discussions with my academic supervisor, there was thoroughness in my management and analysis of the data.

### **8.2 Contributions of the study to local practice**

This research study has contributed the empirical data and analysed findings of internship for physiotherapists from the perspectives of my organization and its stakeholders, which is summarised here. The approach of engaging with stakeholders to jointly address our organizational issue was useful in both inquiring and framing the issues, and fostering a shared ownership of the issues and change needed to shape future practice. Our physiotherapy leaders have also committed themselves to implementable change actions to improve our internship program.

#### *i. Findings (summary)*

The current internship program was rated ‘average’ for training effectiveness, indicating opportunities for improvement by relevant stakeholders. The 6 major

factors or themes that influenced training optimisation were: (1) Coaching activity, (2) Intern (learner) factors, (3) Supervisor (teacher) factors, (4) Intern-supervisor relationship, (5) Environmental factors, and (6) Program factors. The key findings of current internship were:

- a. The concept of supervised practice and the structure, purpose and process of clinical supervision need to be better understood by all involved. This will need to be articulated clearly to avoid wrong expectations, tensions and dissatisfaction among learners and teachers.
- b. Positive attitudes that interns should adopt towards learning, which would include taking responsibility for their learning, adapting to different teaching styles
- c. Motivating and nurturing attitudes that clinical supervisors should adopt, which include creating a safe climate for interns to ask questions
- d. Coaching routines in the presence of patients to be reviewed and enhanced to improve interns' learning experiences and towards developing competence, confidence and professional autonomy
- e. Majority of clinical supervisors were untrained; they should be better equipped with knowledge and skills in educational pedagogies and bedside coaching (supervision in the presence of patients). A mentoring program is also desirable to support clinical supervisors' development as educators
- f. Program elements need further enhancements such as dedicated time for interns' education activities, manageable workload for interns, selection criteria for supervisors, guidance to interns and supervisors to prepare them for their roles and responsibilities as learners and teachers respectively

A surprise finding was how the clinical supervisors viewed the interns as new entrants into the professional community. Their perspectives of them as salaried staff have led the Education leaders and clinical supervisors to have certain attitudes and expectations of them such as fulfilling the full service caseload (interns are monitored closely for this), more critical of their clinical abilities / competence, less tolerant of mistakes and questions asked. The relationship between interns and their supervisors seemed more transactional like 'hired hands' than developmental or nurturing. This finding clearly highlighted the need to ensure all stakeholders have a



good understanding of supervised practice, its purpose and the supervisory process. Tensions and misgivings in clinical supervision will arise if the purpose, structure and process are not clearly defined and understood by all stakeholders; similarly observed by Hall and Cox (2009).

*ii. Influence of engagement on ownership of issue and change*

The research process adopted was a participatory one that involved stakeholders as co-inquirers to explore their lived experiences going through an internship program. This process of engagement and exploration of the issue was new to participants (and researcher) but welcomed by most. Participants had expressed that this is the first time a comprehensive study was conducted wherein 'voices' from all involved parties were heard and improvement strategies were solicited from them. The co-inquiry process was helpful in bringing stakeholders together on the same page; to listen to each other's personal accounts and viewpoints, to discover, to appreciate and understand the issues around clinical internship. As Focus Groups collectively reviewed the survey results and discussed their take of the issues in greater depth, participants gained greater clarity of current gaps in the experiential learning process and the training program. The process of engagement, in my opinion, has influenced to a major extent participants' ownership of the improvement challenge. The conversations and interactions with stakeholders have served to build new shared meanings on internship optimisation and set purpose for a desired future state where interventions, focus and energy can be directed to.

*iii. Action for change by physiotherapy leaders*

Further on, the engagement with influential physiotherapy leaders extended the consensus for change as empirical findings and recommendations were presented, thoroughly substantiated and argued. The candid discussion which sought their inputs on the issues and the empirical data also challenged them to reflect on content, to think from new perspectives and to consider making improvements. The dialogue with physiotherapy leaders was integral in getting the 'buy-in' and

influencing the commitment to take action for change; the result of which was a plan for action described in Chapter 6. I have full confidence in their leadership commitment to implement the changes. As an action learner, I would be pleased to guide them through the iterative process of change action; evaluating the change, inquiry, learning and taking the next action.

This study on supervised practice or clinical internship of physiotherapists is the first of its kind to be conducted in my hospital and in Singapore. My research findings will provide the baseline for my physiotherapy department to reference against as we work on improving our internship program. The knowledge generated is expected to be valuable to other physiotherapy training sites regulated by the Allied Health Professions Council in Singapore.

A clearer understanding of the purpose, structure, process and outcome of clinical supervision is important to support interns in their continuing development as well as the value placed on the activity. The stature of competence for future generations of physiotherapists is contingent on our educational inputs today. Clinical supervision conducted from the perspective of professional development would reap the most benefits as it facilitates reflective practice, critical thinking and clinical reasoning (Clouder, 2000), a process that would enhance the development of interns to confident practitioners and full members of the profession.

### **8.3 Potential contributions to other healthcare leaders**

There is increasing interest by governmental and professional bodies to introduce internship training as they see the importance and benefits of developing clinical competence of its health professionals entering the workforce. My research may be of interest and value to these other healthcare leaders seeking to implement training programs that would successfully transit students to professional practice. The key learning points from my empirical research could perhaps make a potential contribution towards their delivering optimal clinical training experiences for interns;

such as a clear articulation of goals and expectations of internship training, the coaching process, equipping the teacher (clinical supervisor) and creating a favourable learning environment built on trust, nurture and support.

In addition, my study has shown that stakeholder engagement is crucial for change agency. Engaging with key stakeholders allow members firstly to better understand the issues that matter most to them, and the other to influence their ownership of the issues and commitment to take active steps for solution implementation. When engagement goes up, resistance comes down. The initial engagement process of bringing stakeholders together to inquire into their own issues and discuss practical solutions to help bridge the gap between current and ideal or desired state was an important first step. Having conversations with leaders who hold the stakes to make things happen was the next important step in the process of engagement to build the case and extension of consensus for change. Dialogue has legitimacy in influencing accountability and improving decision-making. In summary, I would recommend to healthcare leaders garnering support or 'buy in' of stakeholders for change actions to engage them very early and to definitely include influential others throughout the change or improvement process.

#### **8.4 Limitations of the study**

This research is conducted in a local setting of a huge general tertiary hospital; the findings are context-specific and may not be transferable or generalizable to other healthcare organizations.

Whilst the results may not be generalizable to all settings, the findings are highly relevant and valuable to physiotherapy or healthcare practitioners and contribute to practice-based theory, especially where results compare well with other studies.

### **8.5 Implications for future research**

Novice development is multidimensional and complex, and professional formation is both a process of change within an individual as well as the enculturation of the practitioner into the practice community. Contextually, more detailed exploration of internship and novice development would be beneficial to optimally prepare physiotherapists as full members of the profession. Further research on coaching practice is needed to better understand the activity and its routines, so as to enhance the effectiveness of the supervisory process and learning experiences of interns. Evidence is also needed to understand the causal relationship between the supervisor and intern and its impact on better trained practitioners and improved patient care outcomes.

## **APPENDICES**

## **Appendices**

Appendix 1: Survey questionnaire

Appendix 2: Participant's Information Sheet

Appendix 3a: Topic Guide (Focus Group questions) – Interns

Appendix 3b: Topic Guide (Focus Group questions) – Clinical supervisors

Appendix 3c: Topic Guide (Focus Group questions) – Recent Interns

Appendix 3d: Topic Guide (Focus Group questions) – Community of Physiotherapists

Appendix 4: Consent form

Appendix 5: Form for Focus Group Interview notes (sample)

Appendix 6: Mean and Standard Deviation Charts

## Survey Questionnaire

### **Research Project – Factors influencing the effectiveness of clinical internship for physiotherapists**

Dear Therapist,

You are invited to participate in this survey on '**Factors influencing the effectiveness of clinical internship for physiotherapists**'. Your participation is an important contribution towards our education endeavours to study the impact of teacher-related, learner-related and environmental factors on clinical training, and to prepare interns ready for professional practice. All physiotherapists and physiotherapy interns are eligible to participate in this project and will be asked to complete this survey. The survey will be conducted from now to **dd/mm/yy**. There are 20 questions and it should take you approximately 10 minutes to complete.

Your participation in this study is voluntary. There are no foreseeable risks associated with this project. However, if you feel uncomfortable answering any questions, you can withdraw from the study at any point. It is very important for us to learn your opinions.

Your survey responses will be strictly confidential and data from this research will be anonymised and reported in the aggregate. If you have questions at any time about the survey or the procedures, you may contact Ms Ang Hui Gek at Hp. 9780 5180 or by email at the address specified here: [ang.hui.gek@sgh.com.sg](mailto:ang.hui.gek@sgh.com.sg)

Thank you very much for your time and support. For more details on this opinion survey regarding its purpose, the risks and benefits of participating and use of the findings, please view the attached Participant Information Sheet. If you consent to participate in this opinion survey, please click on the Continue button below to begin.

Please note the following:

**NYP** refers to Nanyang Polytechnic

**Intern** refers to conditionally-registered NYP graduates undergoing supervised 1-year training **Clinical internship** refers to the 1-year training program for fresh NYP graduates

**AHPC supervisor** refers to appointed physiotherapist by Allied Health Professions Council (AHPC) to train and supervise conditionally-registered physiotherapists

Survey questionnaire:

1. I am a

- ☐ NYP physiotherapy graduate currently undergoing conditional registration
- ☐ NYP physiotherapy graduate who recently completed (within past 12 months) conditional registration
- ☐ Foreign-trained conditionally-registered physiotherapist
- ☐ Fully-registered Physiotherapist

2. I am

- ☐ Male
- ☐ Female

3. My professional work experience (including conditional registration) spans

- ☐ Less than 1 year ( eg. NYP intern)
- ☐ 1 to Less than 5 years
- ☐ 5 to Less than 10 years
- ☐ 10 years and above

4. I am an AHPC supervisor, currently supervising NYP interns (conditionally-registered physiotherapists).

- ☐ Yes
- ☐ No

5. The number of NYP interns I supervise in the immediate past year is \_\_\_\_\_.

- ☐ None
- ☐ 1 to 2
- ☐ 3 to 4
- ☐ 5 to 6
- ☐ 7 and more

6. On a scale of 0 to 10; 0 being ineffective and 10 most effective, how would you rate the effectiveness of your department's current internship program in preparing NYP interns for entry to professional practice?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10

Ineffective Most Effective



7. In your opinion, how would you rate the quality of the teaching methods (clinical supervision) in the current internship program?

(Eg. teaching methods such as interaction & discussion to promote critical thinking & clinical reasoning, regular feedback, etc)

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10

Very poor

Excellent

8. In your opinion, how would you rate the quality of the environment in supporting the AHPC supervisor's teaching in the current internship program?

(Eg. teaching facilities, teaching resources and equipment, administrative support available to support teachers in their training of interns, recognition of teachers, etc)

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10

Very poor

Excellent

9. In your opinion, how would you rate the AHPC supervisors' attitude towards teaching in the current internship program?

(Eg. motivated, nurturing, supportive attitudes towards interns, etc)

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10

Very Poor

Excellent

10. In your opinion, how would you rate the AHPC supervisors' skills and abilities in teaching in the current internship program?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10

Very Poor

Excellent

11. In your opinion, how would you rate the quality of the intern's learning methods in the current internship program?

(Eg. learning methods may include individual learning, group/peer learning, collaborative learning models, etc)

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10

Very Poor

Excellent

12. In your opinion, how would you rate the quality of the environment in supporting the intern's learning in the current internship program?

(Eg. nurturing support from senior therapists, helps from other healthcare colleagues in the team, workplace opportunities or distractions that impact intern's learning process, etc)

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10  
Very Poor Excellent

13. In your opinion, how would you rate the interns' attitude towards learning in the current internship program? < For interns, please self-rate your attitude towards learning. >

(Eg. eagerness to learn, reflective, etc)

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10  
Very Poor Excellent

14. In your opinion, how would you rate the interns' knowledge (theory) base in the current internship program? < For interns, please self-rate your knowledge base. >

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10  
Very Poor Excellent

15. How would you rate workload pressure during the current internship program?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10  
None Extremely High

16. How would you rate the staffing level of AHPC supervisors during the current internship program?

☒ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10  
Very Poor Excellent

17. How would you rate organizational and administrative support extended to AHPC supervisors and interns during the current internship program?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10

None Extremely High

18. How would you rate the quality of information sharing and help/guidance from experienced staff (collegiality) during the current internship program?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10

Very Poor Excellent

19. How would you rate the quality of mentorship and role modelling during the current internship program?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10

Very Poor Excellent

20. If you are currently an AHPC supervisor or NYP intern, please respond to this additional question: how would you rate the quality of your relationship with your intern / AHPC supervisor?

☐ 0   ☐ 1   ☐ 2   ☐ 3   ☐ 4   ☐ 5   ☐ 6   ☐ 7   ☐ 8   ☐ 9   ☐ 10

Very Poor Excellent



## Participant Information Sheet

You are invited to participate in this research study on the effectiveness of clinical education for physiotherapists. Before you decide whether to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the information carefully and feel free to ask us if you would like more information or if there is anything that you do not understand. We would like to emphasise that participation is voluntary, and you do not have to accept this invitation if you do not want to take part in it.

Thank you for reading this.

### 1. Title of Study

Factors influencing the effectiveness of clinical internship for physiotherapists

### 2. Version Number and Date

Version 1.0  
October 2014

### 3. What is the purpose of the study?

The purpose of the study is to gain a better understanding of the factors that influence the effectiveness of clinical education for physiotherapy interns from the perspectives of all stakeholders; the learner, the clinical supervisor (educator) and the community of practice.

This is important as the experiential training or internship provide the foundational knowledge and skills for physiotherapy students and interns to transit into future independent practice when they enter the workforce.

The findings and insights from this study will allow strategies to be developed and implemented to improve the current internship program, so that interns may be better prepared for entry into professional practice.

### 4. Why have I been chosen to take part?

All physiotherapists and interns have a stake in the development of future generations of physiotherapists. Every physiotherapist and intern is eligible to participate in this study. A sampling of physiotherapists and interns will be randomly picked and invited to participate in focus group (comprising 6 to 8 persons) discussions to gather in-depth descriptive information on their perspectives of the subject being studied.

### 5. Do I have to take part?

Version 1.0  
October 2014  
AHG

Participation is voluntary and participants are free to withdraw from the study at any time without explanation and without incurring a disadvantage.

**6. What will happen if I take part?**

A focus group of 6 to 8 persons will be involved in the interview session. I (the researcher) will invite you to give your opinions on factors that contribute to the effectiveness of clinical training of physiotherapists, and your experience / opinion of the current internship program. I will also like to hear from participants their suggestions on strategies that could enhance learning experiences and effectiveness of the internship program.

The interview session will take about 1.5 to 2 hours. All participants will be encouraged to participate actively; everyone will get their chance to speak and share their perspectives.

The interview session will be audio recorded so that the researcher can check back on what is shared for accuracy of the descriptive information and for analysis purposes. The responses will be anonymised and individuals will not be identified or identifiable in the report that results from the research. All participants will be informed at the start of the session so that they are aware of and consent to the use of the recordings for the above stated purpose.

**7. Are there any risks in taking part?**

There are no perceived disadvantages or risks involved in taking part in this study. Should any participant experience any discomfort or disadvantage in the process of taking part in the research, he/she should make it known to the researcher(s) immediately.

**8. Are there any benefits in taking part?**

This study would be the first of its kind to gather the perceptions of different stakeholders on clinical education for physiotherapists. The findings will contribute towards understanding the factors that may influence clinical internship and inputs and insights toward developing strategies to improve the effectiveness of clinical internship program.

**9. What if I am unhappy or if there is a problem?**

If you are unhappy, or if there is a problem, please feel free to let us know by contacting the Research Supervisor Dr Paul Ellwood, contact number (+44 151 795 3726 or paul.ellwood@liverpool.ac.uk) and we will try to help. If you remain unhappy or have a complaint which you feel you cannot come to us with then you should contact the Research Governance Officer at ethics@liv.ac.uk. When contacting the Research Governance Officer, please provide details of the name or description of the study (so that it can be identified), the researcher(s) involved, and the details of the complaint you wish to make.

**10. Will my participation be kept confidential?**

The interview is audio recorded, and the recording will be stored securely in a personal computer which is password protected. The data collected will be kept for 5 years after the completion of this research before it is disposed of / deleted.

**11. What will happen to the results of the study?**

The results of the study will be published as my thesis dissertation for my DBA course. If acceptable for journal publication, I would like to present the findings of this study in a suitable journal so that the physiotherapy community of practice have access to the study findings. All participants can be assured that they will not be identified or identifiable in the report as the responses to the study will be anonymised.

**12. What will happen if I want to stop taking part?**

Participants can withdraw from the study at any time, without explanation. As results are anonymised, participant's responses may only be withdrawn prior to anonymisation.

**13. Who can I contact if I have further questions?**

You may contact the following:

Research Supervisor:	Dr Paul Ellwood
Address:	University of Liverpool Management School, Chatham Street, Liverpool, UK, L69 7ZH
Contact number:	+44 151 795 3726
Student researcher:	Hui-Gek Ang
Address:	Singapore General Hospital
Contact number:	(65) 97805180

## Topic Guide (Focus Group questions) – Interns

### Discussion questions

Q1. In your opinion, what factors contribute to effectiveness of clinical internship training (or conditional registration training) for physiotherapists?

You can describe positive factors that enhance the training or factors that impact negatively on training.

Q2. Referring to the table sent to you prior to this meeting, what comments do you have regarding the overall results?

Q3. Referring to the table sent to you prior to this meeting, what comments do you have regarding factors concerning the supervisor?

- a. Teaching (clinical supervision)
- b. Environment supporting the supervisors in their teaching
- c. Attitudes towards teaching
- d. Skills and abilities in teaching
- e. Staffing level of supervisors

Q4. Referring to the table sent to you prior to this meeting, what comments do you have regarding factors concerning the interns?

- a. Interns' learning methods
- b. Environment supporting the interns in their learning
- c. Interns' attitude towards learning
- d. Interns' knowledge base

Q5. Describe the impact of workload pressure on your clinical training. Refer to table, the means reading is 7.57.

Q6. What aspects of organizational and administration support are needed for interns and supervisors in their clinical training? Can you describe. Refer to table, the means reading is 5.71.

Q7. How would you describe your work environment with regards to experienced staff sharing information or providing help / guidance to interns? To what extent do you think it impacts on your clinical learning experiences?

OR

[Stimulus material]

Q8. In your opinion, is mentorship and role modelling important to enhancing clinical training of interns. Please describe your current experiences.

Q9. Tell me more about your relationship with your clinical supervisors. What positive or negative impact does the relationship have on your current learning experiences?

Q10. Let me now share with you some results of the survey. The responses are organised into 3 broad groups; interns, supervisors and other physiotherapists. (*Mean & SD charts will be presented on Powerpoint slides*).

Please feel free to give your comments.

Q11. What strategies do you think can help increase effectiveness of clinical internship of physiotherapists to better prepare them for independent and professional practice?

Q12. [Activity] Please rank the level of importance of the following factors in influencing the effectiveness of clinical internship of physiotherapists

- Supervisor-related factors
- Intern-related factor
- Environment-related factors
- Intern-supervisor relationship
- Others (*to specify if there are new items raised at FG*)

### **Stimulus Material**

In a published study, it was suggested that **Community receptivity and responsiveness, care, respect and empathy are important in supporting trainees' learning process** (Margaret Plack, 2008).

-In your opinion, how important does the community of healthcare practitioners contribute to enhancing the clinical learning environment and training? Please explain.

-How has the community of healthcare practitioners impact your current learning experiences?



Topic Guide (Focus Group questions) – Clinical Supervisors

**Discussion questions**

Q1. In your opinion, what factors contribute to effectiveness of clinical internship training (or conditional registration training) for physiotherapists?

You can describe positive factors that enhance the training or factors that impact negatively on training.

Q2. Referring to the table sent to you prior to this meeting, what comments do you have regarding the overall results?

Q3. Referring to the table sent to you prior to this meeting, what comments do you have regarding factors concerning the supervisor?

- a. Teaching (clinical supervision)
- b. Environment supporting the supervisors in their teaching
- c. Attitudes towards teaching
- d. Skills and abilities in teaching
- e. Staffing level of supervisors

Q4. Referring to the table sent to you prior to this meeting, what comments do you have regarding factors concerning the interns?

- a. Interns' learning methods
- b. Environment supporting the interns in their learning
- c. Interns' attitude towards learning
- d. Interns' knowledge base

Q5. Describe the impact of workload pressure on clinical training of interns. Refer to table, the 'Mean' reading is 6.82.

Q6. What aspects of organizational and administration support are needed to support interns and supervisors in their clinical training and teaching? Please describe. Refer to table, the 'Mean' reading is 5.45.

Q7. In your opinion, what is an ideal staffing level for supervisors to interns?

Q8. How would you describe the work environment with regards to sharing information or providing help / guidance by experienced staff to interns? To what extent do you think it impacts on interns' clinical learning experiences?

Q9. In your opinion, is mentorship and role modelling important to enhancing clinical training of interns. Please describe your current experiences or observations.

Q10. [*Stimulus*] In a published study (Roberts, 2001), it was suggested that **teacher-learner relationships are vital to learning and/or improvement process. The feeling of trust and rapport should be present for effective clinical supervision.** What is your opinion?

Q11. Tell me more about your relationship with your interns. What positive or negative impact does the relationship have on your interns' learning experiences?

Q12. Let me now share with you some results of the survey. The responses are organised into 3 broad groups; interns, supervisors and other physiotherapists. (*Mean & SD charts will be presented on Powerpoint slides*).

Please feel free to give your comments.

Q13. What strategies do you think can help increase effectiveness of clinical internship of physiotherapists to better prepare them for independent and professional practice?

Q14. [*Activity*] Please rank the level of importance for the following factors in influencing the effectiveness of clinical internship of physiotherapists

- Supervisor-related factors
- Intern-related factor
- Environment-related factors
- Intern-supervisor relationship
- Others (*to specify if there are new items raised at FG*)

## Topic Guide (Focus Group questions) – Recent Interns

### Discussion questions

Q1. In your opinion, what factors contribute to effectiveness of clinical internship training (or conditional registration training) for physiotherapists?

You can describe positive factors that enhance the training or factors that impact negatively on training.

Q2. Referring to the table sent to you prior to this meeting, what comments do you have regarding the overall results?

Q3. Referring to the table sent to you prior to this meeting, what comments do you have regarding factors concerning the supervisor?

- a. Teaching (clinical supervision)
- b. Environment supporting the supervisors in their teaching
- c. Attitudes towards teaching
- d. Skills and abilities in teaching
- e. Staffing level of supervisors

Q4. Referring to the table sent to you prior to this meeting, what comments do you have regarding factors concerning the interns?

- a. Interns' learning methods
- b. Environment supporting the interns in their learning
- c. Interns' attitude towards learning
- d. Interns' knowledge base

Q5. Describe the impact of workload pressure on clinical training of interns.

Q6. What aspects of organizational and administration support are needed to support interns and supervisors in their clinical training and teaching? Please describe. Refer to table, the 'Mean' reading is 5.49.

Q7. In your opinion, what is an ideal staffing level for supervisors to interns?

Q8. How would you describe the work environment with regards to sharing information or providing help / guidance by experienced staff to interns? To what extent do you think it impacts on interns' clinical learning experiences?

Q9. In your opinion, is mentorship and role modelling important to enhancing clinical training of interns. Please describe your current experiences or observations.

Q10. In your opinion, how vital is teacher-learner relationship in clinical internship?

Q11. [*Stimulus*] In one published study, **characteristics of Interns that are useful in learning situations, and therefore increase training effectiveness, include: adaptable, motivated, persistent, self-directed and receptive** (Margaret Plack, 2008, The Learning Triad). In your opinion, did these characteristics play a significant part in the overall effectiveness of your clinical training experiences? Please explain.

Q12. Let me now share with you some results of the survey. The responses are organised into 3 broad groups; interns, supervisors and other physiotherapists. (*Mean & SD charts will be presented on Powerpoint slides*).

Please feel free to give your comments.

Q13. What strategies do you think can help increase effectiveness of clinical internship of physiotherapists to better prepare them for independent and professional practice?

Q14. [*Activity*] Please rank the level of importance for the following factors in influencing the effectiveness of clinical internship of physiotherapists

- Supervisor-related factors
- Intern-related factor
- Environment-related factors
- Intern-supervisor relationship
- Others (*to specify if there are new items raised at FG*)

Topic Guide (Focus Group questions) – Community of Physiotherapists

**Discussion questions**

Q1. In your opinion, what factors contribute to effectiveness of clinical internship training (or conditional registration training) for physiotherapists?

You can describe positive factors that enhance the training or factors that impact negatively on training.

Q2. Referring to the table sent to you prior to this meeting, what comments do you have regarding the overall results?

Q3. Referring to the table sent to you prior to this meeting, what comments do you have regarding factors concerning the supervisor?

- a. Teaching (clinical supervision)
- b. Environment supporting the supervisors in their teaching
- c. Attitudes towards teaching
- d. Skills and abilities in teaching
- e. Staffing level of supervisors

Q4. Referring to the table sent to you prior to this meeting, what comments do you have regarding factors concerning the interns?

- a. Interns' learning methods
- b. Environment supporting the interns in their learning
- c. Interns' attitude towards learning
- d. Interns' knowledge base

Q5. Describe the impact of workload pressure on clinical training of interns.

Q6. What aspects of organizational and administration support are needed to support interns and supervisors in their clinical training and teaching? Please describe. Refer to table; the 'Mean' reading is 5.49.

Q7. In your opinion, what is an ideal staffing level for supervisors to interns?

Q8. How would you describe the work environment with regards to sharing information or providing help / guidance by experienced staff to interns? To what extent do you think it impacts on interns' clinical learning experiences?

Q9. [Stimulus] In a study (Recker-Hughes et al., 2014), it was suggested that **students thrive in a practice environment where the organizational culture recognises the importance of lifelong learning and promote integration and inclusion of students**. How important is this in enhancing the training effectiveness of interns?

Q10. In your opinion, is mentorship and role modelling important to enhancing clinical training of interns. Please describe your current experiences or observations.

Q11. In your opinion, how vital is teacher-learner relationship in clinical internship?

Q12. Let me now share with you some results of the survey. The responses are organised into 3 broad groups; interns, supervisors and other physiotherapists. (*Mean & SD charts will be presented on Powerpoint slides*).

Please feel free to give your comments.

Q13. What strategies do you think can help increase effectiveness of clinical internship of physiotherapists to better prepare them for independent and professional practice?

Q14. [Activity] Please rank the level of importance for the following factors in influencing the effectiveness of clinical internship of physiotherapists

- Supervisor-related factors
- Intern-related factor
- Environment-related factors
- Intern-supervisor relationship
- Others (*to specify if there are new items raised at FG*)



## Committee on Research Ethics

### PARTICIPANT CONSENT FORM

**Research Project:**

Factors influencing the effectiveness of clinical internship for physiotherapists

**Researcher(s):**

Hui-Gek Ang, Dr Paul Ellwood (Supervisor)

Please  
initial box

1. I confirm that I have read and have understood the information sheet dated Oct 2014 for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my rights being affected. In addition, should I not wish to answer any particular question or questions, I am free to decline.
3. I understand and agree that my participation will be audio recorded and I am aware of and consent to your use of these recordings for the purposes of gathering descriptive information on the subject being studied.
4. I understand that, under the Data Protection Act, I can at any time ask for access to the information I provide and request for the destruction of that information if I wish, prior to anonymisation.
5. I give permission for members of the research team to have access to my anonymised responses. I understand that my name will not be linked with the research materials, and I will not be identified or identifiable in the report or reports that result from the research.
6. I agree for the data collected from me to be used in relevant future research.
7. I agree to take part in the above study.

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Participant Name

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Date

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Signature

Ang Hui Gek

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Researcher

---

Date

---

Signature

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**Student Researcher:**

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Singapore General Hospital  
(65) 63266101  
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## Form for Focus Group Interview notes (sample)

## FG Interview notes

Date: 20/1/15

Place: Academia, Room AC-5-3

Group: Interns

- I. Welcome
- II. Consent-taking
- III. Project Brief (purpose, use of results)
- IV. Participant Introductions
- V. FG Discussion

Question 1: In your opinion, what factors contribute to effectiveness of clinical internship training (or conditional registration training) for physiotherapists?

You can describe positive factors that enhance the training or factors that impact negatively on training.

<u>Responses from participants</u>	<u>Observations</u>

Question 2: Referring to the table sent to you prior to this meeting, what comments do you have regarding the overall results?

<u>Responses from participants</u>	<u>Observations</u>

Question 3: Referring to the table sent to you prior to this meeting, what comments do you have regarding factors concerning the supervisor?

- a. Teaching (clinical supervision)
- b. Environment supporting the supervisors in their teaching
- c. Attitudes towards teaching
- d. Skills and abilities in teaching
- e. Staffing level of supervisors

<u>Responses from participants</u>	<u>Observations</u>

Question 4: Referring to the table sent to you prior to this meeting, what comments do you have regarding factors concerning the interns?

- a. Interns' learning methods
- b. Environment supporting the interns in their learning
- c. Interns' attitude towards learning
- d. Interns' knowledge base

<u>Responses from participants</u>	<u>Observations</u>

**Question 5:** Describe the impact of workload pressure on your clinical training. Refer to table, the 'Mean' reading is 7.57.

<u>Responses from participants</u>	<u>Observations</u>

**Question 6:** What aspects of organizational and administration support are needed to support interns and supervisors in their clinical training and teaching? Please describe. Refer to table; the 'Mean' reading is 5.71.

<u>Responses from participants</u>	<u>Observations</u>

**Question 7:** How would you describe the work environment with regards to experienced staff sharing information or providing help / guidance to interns? To what extent do you think it impacts on your clinical learning experiences?

OR

[Stimulus material c]

<u>Responses from participants</u>	<u>Observations</u>

**Question 8:** In your opinion, is mentorship and role modelling important to enhancing clinical training of interns. Please describe your current experiences.

<u>Responses from participants</u>	<u>Observations</u>

**Question 9:** Tell me more about your relationship with your clinical supervisors. What positive or negative impact does the relationship have on your current learning experiences?

<u>Responses from participants</u>	<u>Observations</u>

**Question 10:** Let me now share with you some results of the survey. The responses are organised into 3 broad groups; interns, supervisors and other physiotherapists. (*Mean & SD charts will be presented on Powerpoint slides*).

Please feel free to give your comments.

<u>Responses from participants</u>	<u>Observations</u>

Question 11: What strategies do you think can help increase effectiveness of clinical internship of physiotherapists to better prepare them for independent and professional practice?

<u>Responses from participants</u>	<u>Observations</u>

Question 12: [Activity] Please rank the level of importance of the following factors in influencing the effectiveness of clinical internship of physiotherapists

- Supervisor-related factors
- Intern-related factor
- Environment-related factors
- Intern-supervisor relationship
- Others (*to specify if there are new items raised at FG*)

Instruction for activity:

You are given 10 coloured stickers. Please paste the stickers on the chart against the 'factor'; more stickers would mean more important. You can choose not to put any sticker if a factor is unimportant. Similarly there is no limit to the number of stickers you put against any 'factor'.

<u>Responses from participants</u>	<u>Observations</u>

Question X:

<u>Responses from participants</u>	<u>Observations</u>

Question Y:

<u>Responses from participants</u>	<u>Observations</u>

**VI. Closing comments**

- a) Thank participants
- b) Inform results will be shared with the department
- c) Do you have any feedback on the research process (what went well, what needs working on)

Feedback from participants on FG

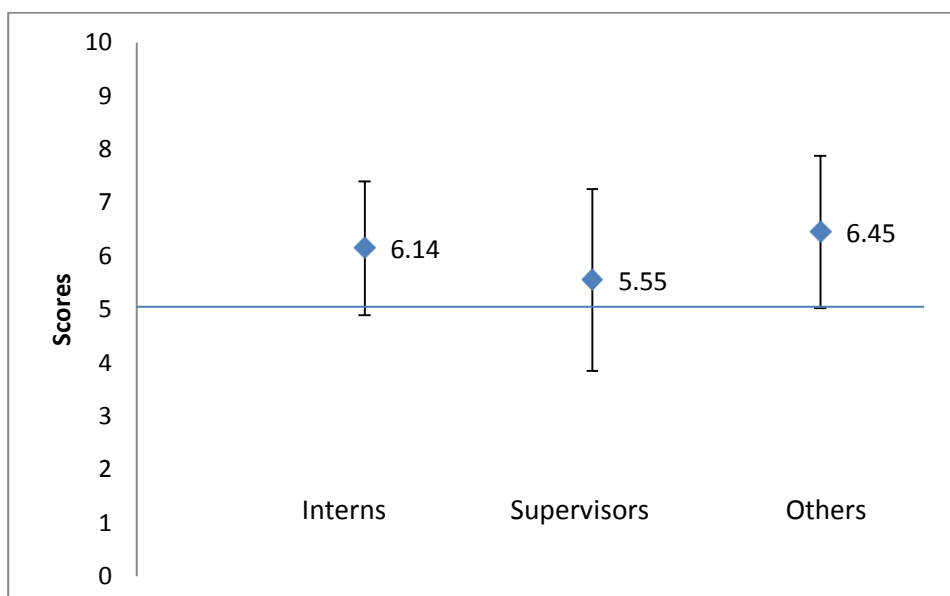
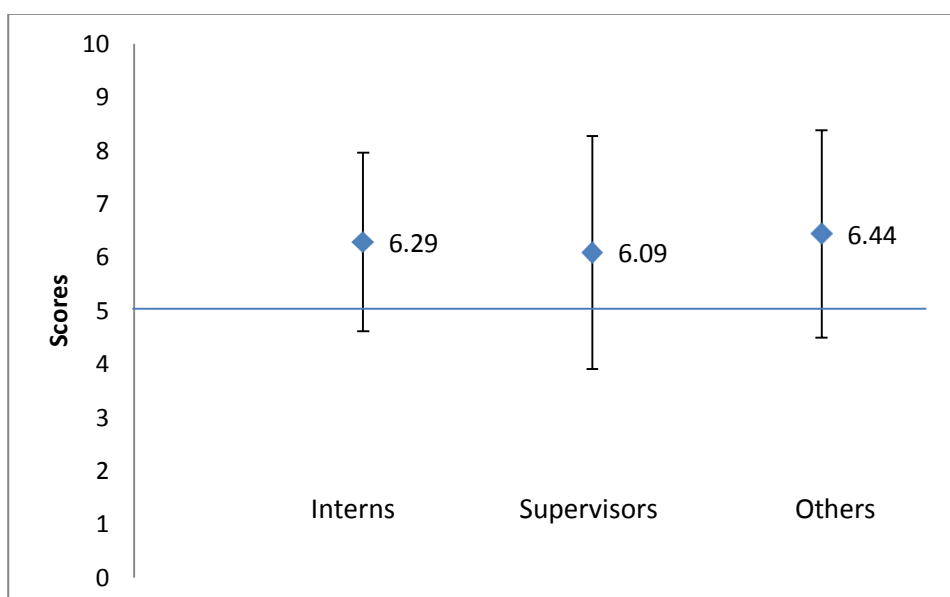
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My Reflections post-FG

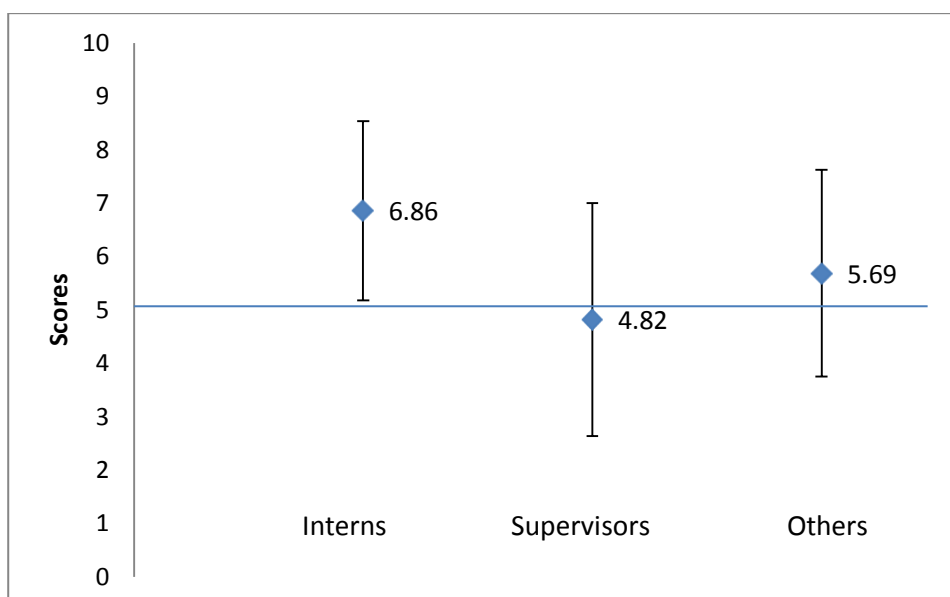
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## Mean and Standard Deviation Charts

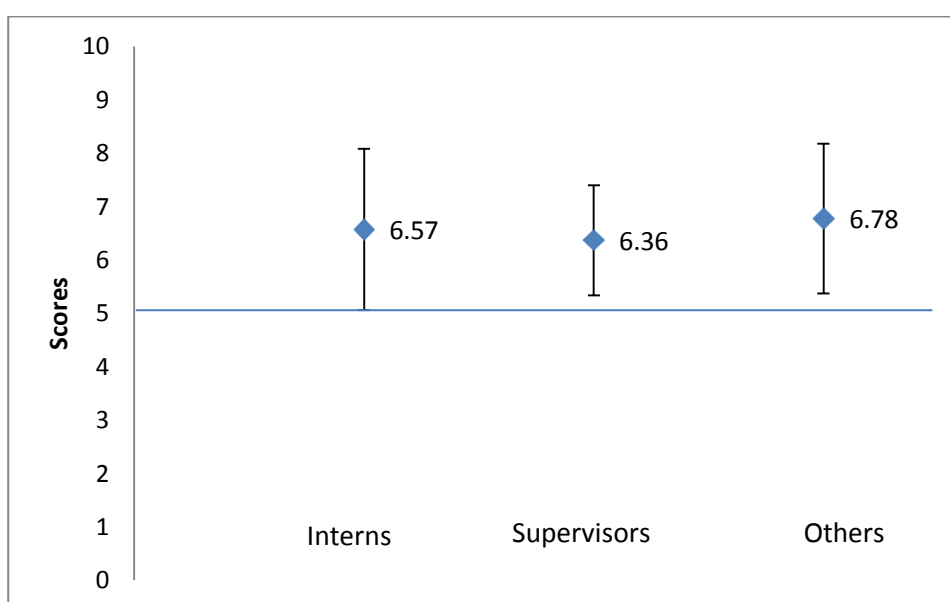
(Results according to Survey questions Q6 to Q20)

Q6: Effectiveness of current internship programQ7: Quality of teaching methods (clinical supervision)

Q8: Quality of environment in supporting supervisors' teaching

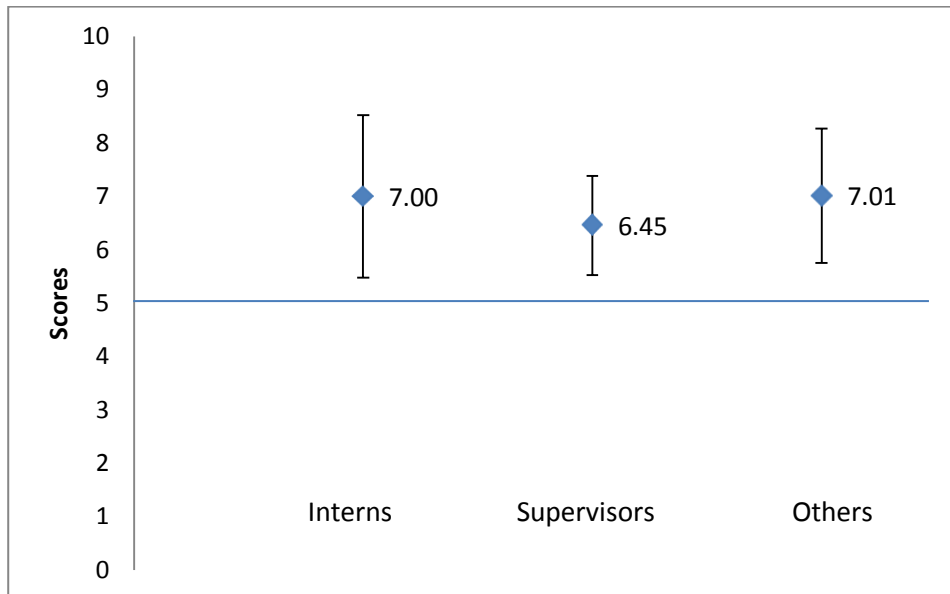


Q9: Supervisors' attitude towards teaching

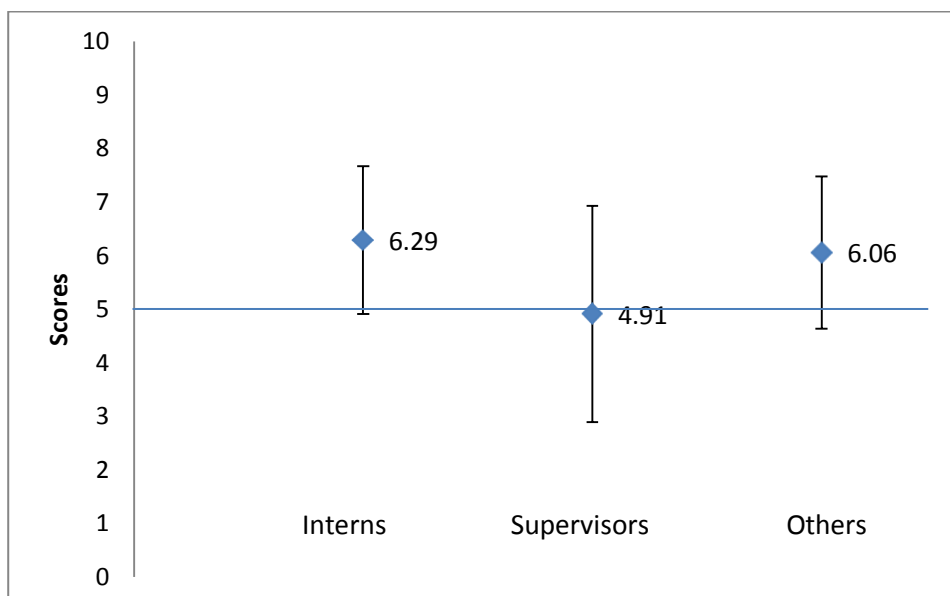




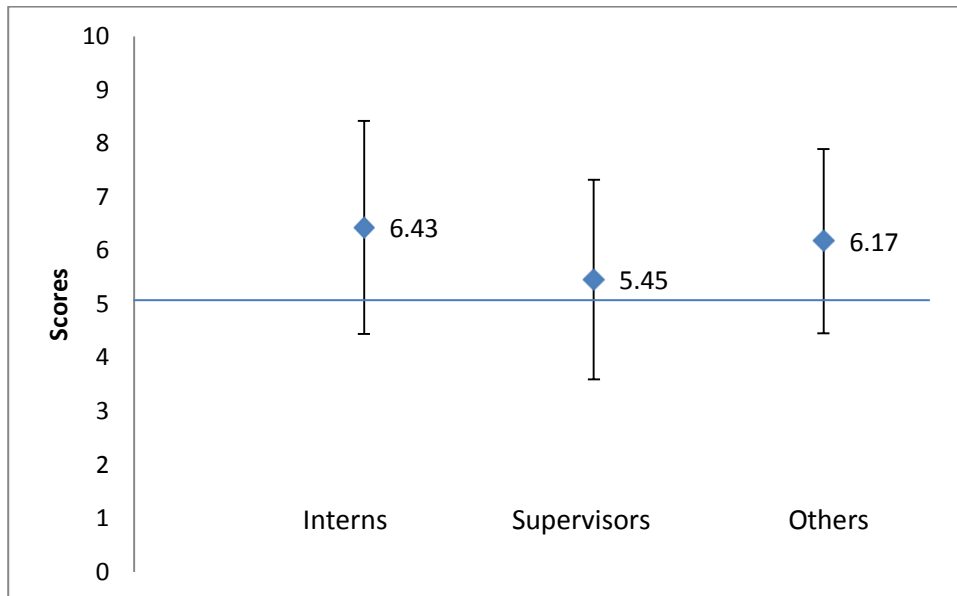
Q10: Supervisors' skills and abilities in teaching



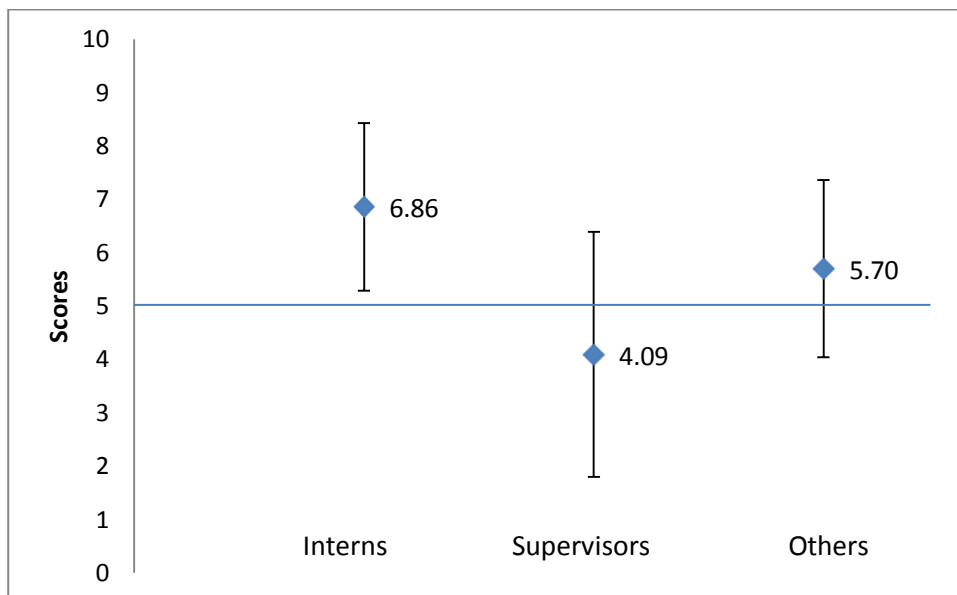
Q11: Interns' learning method



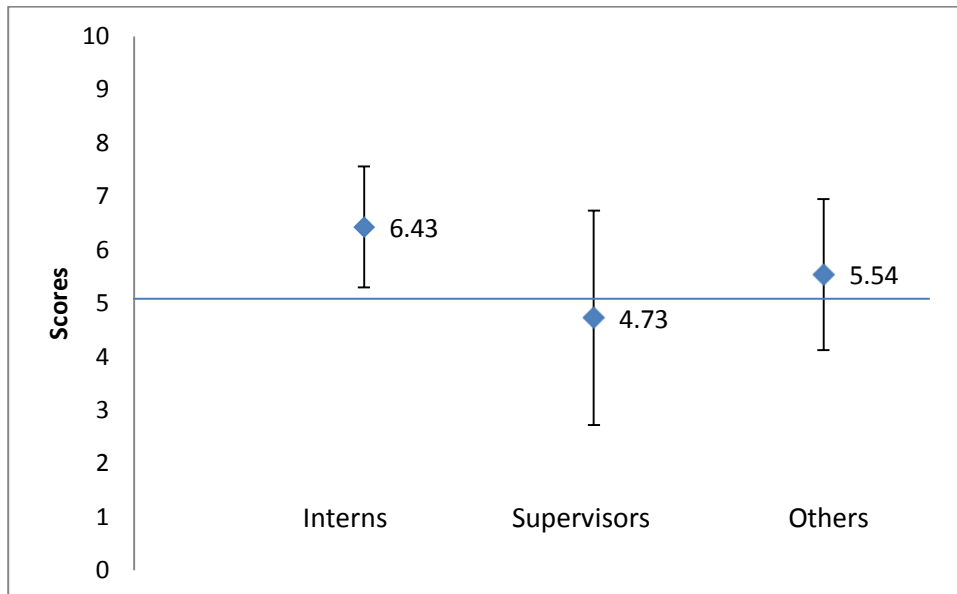
Q12: Quality of environment in supporting interns' learning



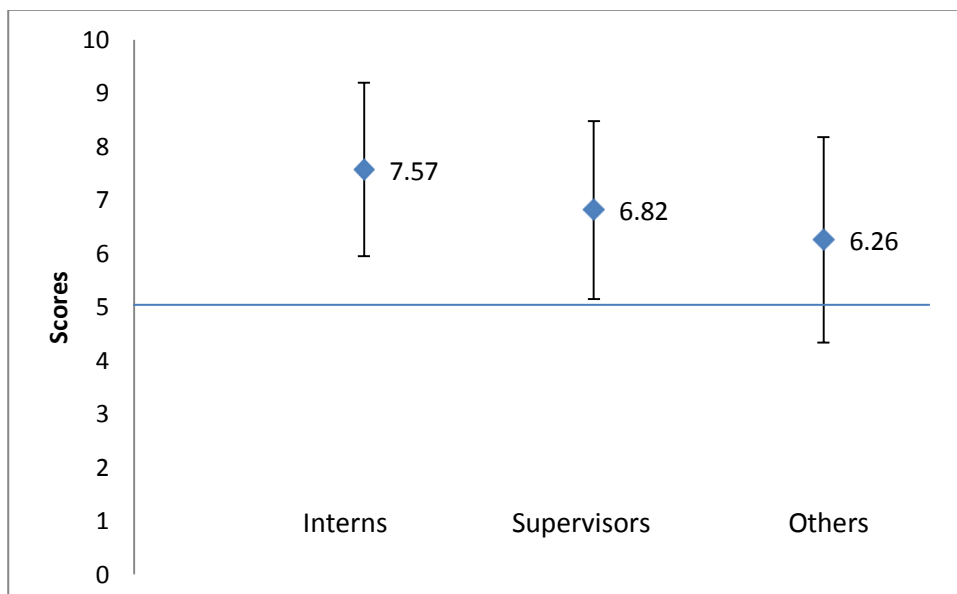
Q13: Interns' attitude towards learning



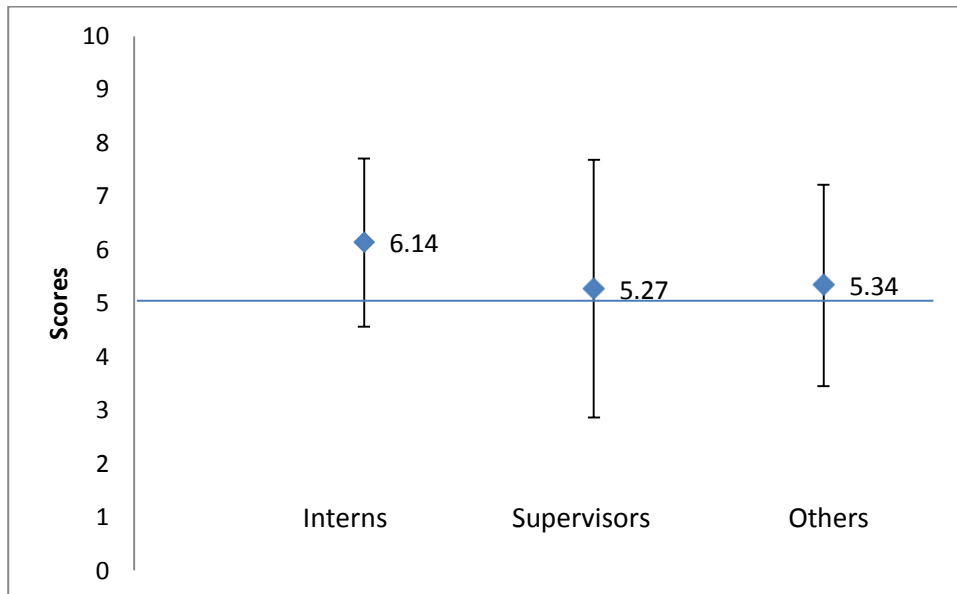
Q14: Interns' knowledge (theory) base



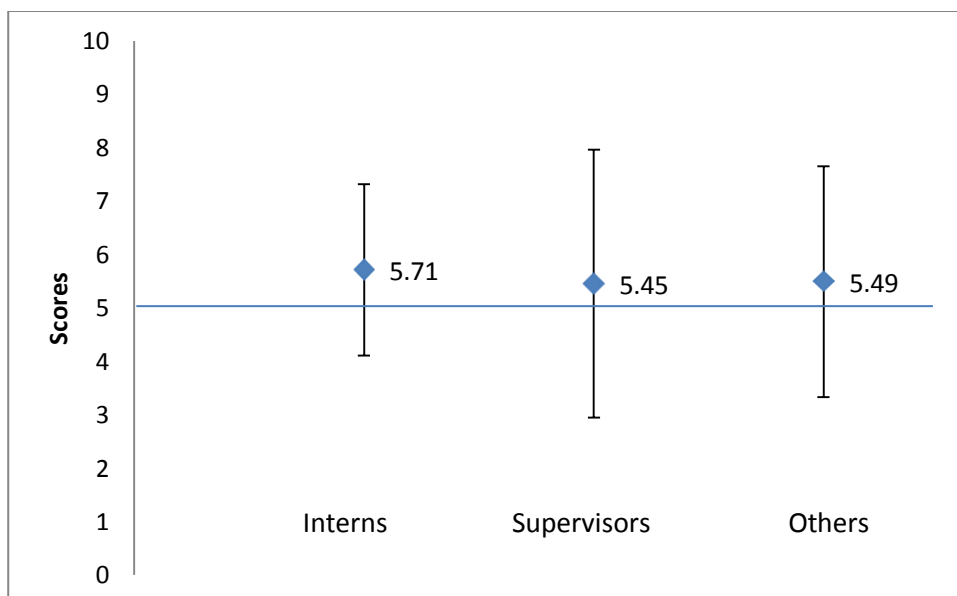
Q15: Workload pressure



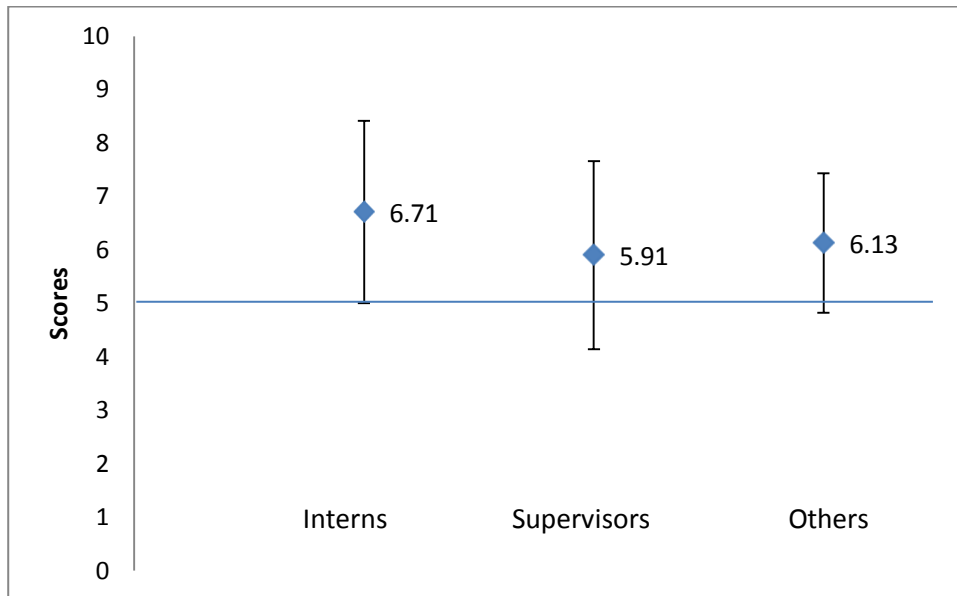
Q16: Staffing level of supervisors



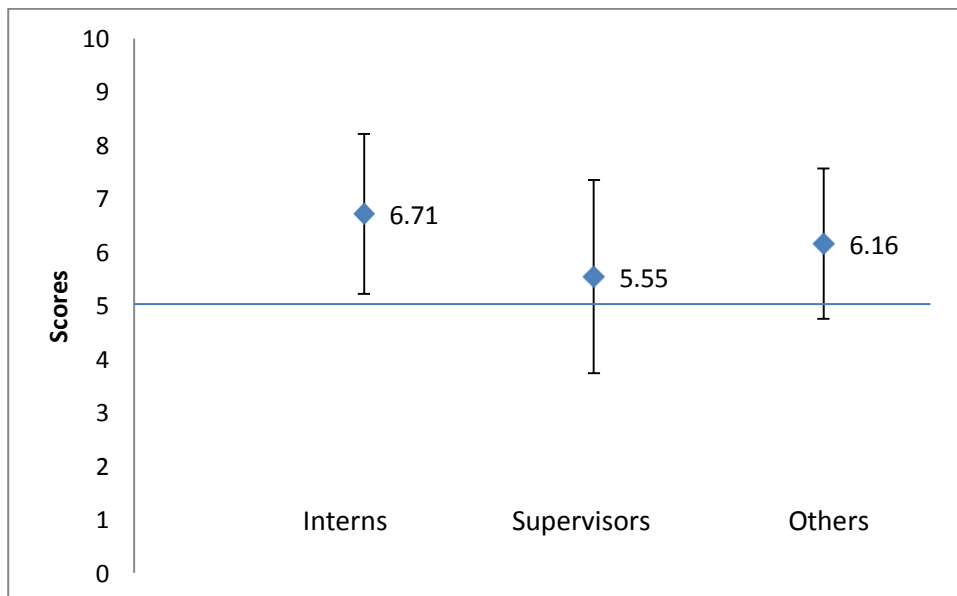
Q17: Organizational & admin support to supervisors & interns



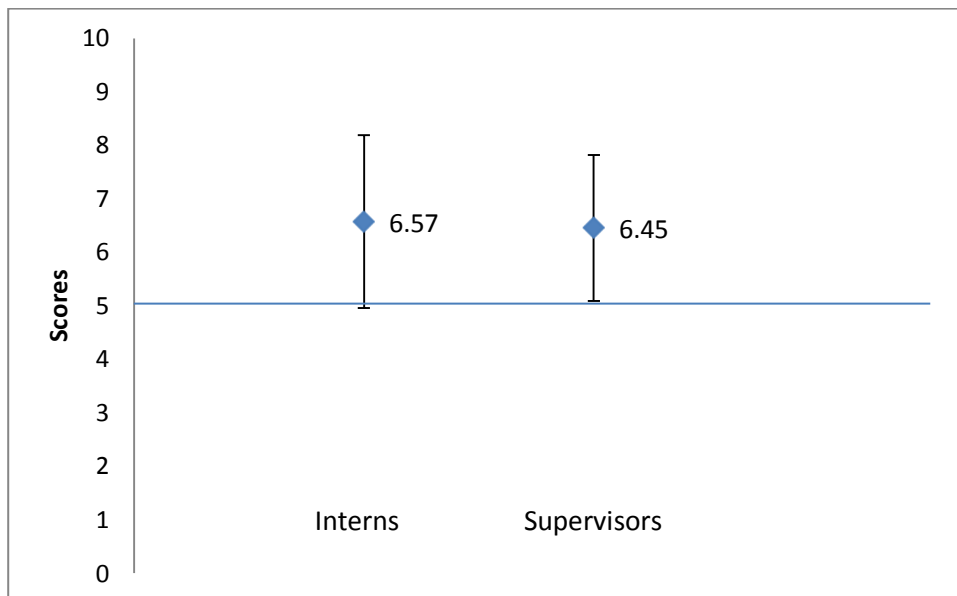
Q18: Information sharing & help/guidance from experienced staff



Q19: Mentorship and role modelling



Q20: Quality of intern-supervisor relationship



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